THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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The Cultivator & Country Gentleman.

SCATTERED NOTES OF TRAVEL.

Rochester and Vicinity.

A brief jaunt to Rochester and vicinity afforded an opportunity to observe several objects of interest, which the readers of the COUNTRY GENTLEMAN may like to hear. In visiting most of the large nurseries, the effects of the war were plainly visible in the diminished energy which they generally exhibited. The owners do not expect the sales they made two years since, and are unwilling to employ so large a force. Weeds were consequently not quite so rare as formerly—some nurseries, indeed, showed them in rather formidable aspect. There are, nevertheless, a vast number of fine saleable trees, single establishments having many hundred thousands. HOOKER and FARLEY of Brighton, showed me a block of some 200,000 apple trees of excellent growth six or seven feet high, their grounds altogether comprising a hundred acres or more actually under nursery trees. H. S. HOOKER & Co., have a promising young growth of pears, cherries, and apples. ELLWANGER & BARRY still keep up their immense 500 acre establishment. Although they are now doing more than last year, they have diminished their previous force, having reduced the number of their hands to one hundred and thirty for the summer. Their home grounds even exceed in beauty and finish the appearance of former seasons. I have never seen a softer velvet than their lawns exhibit, which are cut by means of Swift's Lawn-Mower with a more perfect finish than could ever be done by hand. The long walk, extending a half-mile from their office to the rear grounds, and which is about 10 feet wide, appeared like a polished green ribbon. Phloxes, verbenas, gladioli, tiger flowers, &c., were in large masses on either side, and afforded a brilliant display. This lawn-mower operates entirely different from a common mowing machine, consisting essentially of a cylinder of knives (somewhat resembling those of a straw-cutter) which is made to revolve backwards with great velocity in a hollow bed, which slides over the surface of the ground, and giving a cut less than half an inch high. The surface of the ground must of course be very smooth, and grass over two inches high cannot be cut. Hence the owner is *compelled* to keep his lawn closely sheared. The feet of the horse which draws it, are shielded so as not to bruise the turf; and the machine cuts a strip of grass about two feet wide. Its cost is $55.

Many kinds of hedge plants are under trial on these grounds—the honey locust promises well as a hardy plant. A dense screen of Norway spruce eight feet high, has been formed in a few years by planting the trees a foot and a half apart. A portion of the grounds is subdivided into small compartments, the subdivisions formed of arbor vitæ hedges, which serve as an excellent shelter to tender plants from cold and cutting winds. The bearing dwarf trees, of which there are thousands, still exhibit their vigor and productiveness. The owners have resorted to the jarring system to save their plums. Several hundred trees were loaded with this fruit. Two men were employed two or three hours each day in jarring the insects on the spread sheets. They find the Primordian the best *very early* sort—it was nearly past its season; St. Etienne, a fruit somewhat resembling it, but larger, was fully ripe; and Precoce de Bergthold beginning to mature. On older trees, with less vigor of growth, these sorts (as well as other fruits) would be a week or two earlier. The last named variety is stated by Downing to be as early and better than the Primordian; but the experiment here shows it to be some two weeks later. The Early Orleans and Royal Native had scarcely begun to ripen.

At Rochester, as elsewhere, there is a profuse crop of nearly every kind of fruit. Apricot trees were observed in different parts of the city, bending under loads of ripe fruit. Nearly all appeared to be the Breda, the only hardy, reliable sort raised here. The curculio has appeared in diminished numbers—having starved last year, as some suppose, for want of a crop to live in. There are nevertheless plenty yet left, for all practical, destructive purposes. Apricots sell at about five dollars per bushel in the city; early apples at only one dollar per barrel. Land owners, however, do not fear to plant orchards of winter varieties. Well grown, well selected, and well packed specimens, that dealers can *rely* on as good, still command encouraging prices. Hooker and Farley showed me five trees of the Baldwin, from which they had sold in one year seventy dollars worth of apples. On my way from Macedon to Walworth, I rode past an orchard of about 150 trees which I had seen planted eight years before, the heads now ten feet in diameter, and in full bearing. Two seasons ago, or the sixth year, this orchard

bore forty barrels, besides a supply of sweet varieties not measured. It had been cultivated with beans, potatoes, and corn, and more recently the ground had been top-dressed. It was planted by a man then *seventy-eight years old*, and now he is in full health and vigor enjoying the fruits. At T. G. YEOMANS' of Walworth, are large orchards of Baldwin apple trees, many of which have averaged two to three barrels each tree, at six years from setting out.

YEOMANS' NURSERY AND ORCHARDS, WALWORTH.—The readers of the COUNTRY GENTLEMAN have heard the fame of these grounds. They are as flourishing as ever. There are eleven acres of dwarf pear orchards, and 120 acres of other fruits, mostly apples. About 100 acres are in nursery, a large share of which is dwarf pears. The dwarf pear crop promises to be a good one the present year. The most remunerative part is a third of an acre, which bore a crop two successive years, the first selling for $400, and the next $500—$900 in the two years. The trees are 10 feet apart, and are cultivated with a two-horse team. They have now become so large that it is difficult to pass two horses, and 12 feet distance is preferred. The round form of training is preferred to the pyramidal. Some beautiful, nearly globular, or rather hemispherical headed trees were observed. They are pruned annually in winter or spring, and manured every two or three years. The Bartlett and Flemish Beauty are both cultivated as dwarfs to some extent, but are always double-worked. The proprietor differs from most as to the height of the heads in young orchard apple trees. His rule is *six feet* of clear bare stem before the branches of the head commence. This allows the horses to pass under freely, to give thorough cultivation which so largely contributes to his success. When the trees are large and bear heavy crops, the long branches, even at this height, are brought down to the ground. Those who prefer such tall-topped trees will ascribe his success to this practice; while others, who prefer low heads, will look upon the excellent culture which the trees receive, as sufficient to insure success, even in spite of an objectionable form of training.

In a nursery like this, where dwarf pears form a large part, it is essential to have a good supply of manure. A large amount is therefore purchased yearly and manufactured into compost. Swamp muck has been extensively employed. One-tenth to one-twentieth of ashes is also added. When muck cannot be obtained, ashes alone have been used, and are regarded as one of the best applications to prevent the waste of volatile parts—whatever theory may be, this is the opinion derived from experiment. The manure has to be drawn several miles, mostly from Palmyra and Macedon, and costs when deposited on the land about a dollar and a half per load. In one year, $1,800 were expended for manure. About 30 hands are employed during the season, and 60 or 70 during the digging and packing season.

GROUNDS OF E. W. HERENDEEN, MACEDON.—It was interesting to observe the growth of trees formerly planted on these grounds by the writer of these sketches. A *Black apricot*, standing on a hard gravelly spot, where it could not be cultivated, was still healthy and in a growing state. It is some 25 years old, and is 9 inches in diameter. Being in a remote part of the grounds, the curculio had always taken every fruit. This year a limb was sawed off to strike against for jarring the insects down—an expedient essential for a tree of this size. It was jarred daily and 170 insects caught and killed, and a moderate crop saved. This apricot, as is well known, is a different species from all others, and is as hardy as a maple. The fruit is not so good, but some prefer it, and when fully ripe is very pleasant and agreeable, while it has a rich handsome appearance. A *Washington pear* tree, standing near this apricot, on similar ground and under like treatment, is growing vigorously and bearing profusely. It is 7 inches in diameter, and has borne a good crop for many years without a failure, averaging about one barrel of fruit yearly. A few rods distant, a younger tree of Osband's summer pear (some 15 years old,) was bending under a heavy load of fruit, just beginning to ripen. No two varieties can probably excel the Washington and Osband for light gravelly soils and neglected culture; and those who cannot be persuaded to give their trees any culture whatever, would do well to plant these sorts for market, although they would doubtless be much improved in size by better care.

The difference in soils as affecting the growth of the pear exhibited in different regions, possessing nearly equal degrees of fertility for other purposes, is sometimes very striking, and is especially conspicuous in comparing the soil of Macedon, formerly occupied by the writer, and that of Union Springs, cultivated at the present time. Both grow equally good crops of wheat, corn, potatoes and grass, and such young fruit trees as the apple, peach and cherry. Young plum trees on anything else than the Canada stock can be scarcely grown at all at Macedon; while at Union Springs all sorts grow luxuriantly. At the latter place standard pears in the nursery are as large in two years as in ten years at the former place. Dwarf pears, on the contrary, grow best at Macedon. E. W. Herendeen showed me a block of 20,000 of these, which in two years had, without any manure, attained a height from five to seven feet, after cutting back for perfecting a good form, while beside them standard pears were feeble and unpromising. At Union Springs two years' standards, without manure, are often seven feet high. It is generally supposed that a large portion of clay is essential to the successful growth of the standard pear. This is partly corroborated by the fact that the soil is generally light at Macedon, and heavy or clayey at Union Springs; but this cannot be the whole reason. For in certain spots in the last named locality, marked as *quite sandy*, the standard pears grow as vigorously as in hard adhesive clay. The peculiarly favorable quality appears to belong to the whole region, and not to be influenced by the proportion of clay in the composition. In other regions, not so favorable, where certain spots are so clayey as to show numerous hard clods, these trees grow no better than on lighter portions of ground. While therefore, as a general rule, clayey regions are best, yet the whole influences do not appear to be yet fully ascertained. It is a question for further investigation.

An accidental experiment with irrigation in this neighborhood furnishes confirmation of the opinion of A. B. DICKINSON on the advantage of spreading a thin layer of washed soil over the surface of grass lands, as a sort of mulch. An alluvial meadow of four acres, which I have known for more than twenty years, and which was never plowed during this period, has generally cut about two tons of hay per acre. It is very rarely overflowed, and has of late years rather declined in its crop of hay. But

an extrordinary flood from Mud creek deposited about an inch of fine mud over its whole surface. This mud was merely the washed soil from the country above. The consequence of this deposite was a doubling of the crop of hay, which was nearly four tons per acre the present year. E. W. Herendeen informed me that he drew 13 very large two-horse loads of hay from the four acres, each load being fully equal to such as he has weighed at 2,800 pounds each, which would make 15 tons for the four acres, or 3¾ tons each. J.

The Agriculture of the State of New-York.

IS IT RETROGRADING OR ADVANCING?

THE CENSUS RETURNS of our *Agricultural Productions in the State of New-York*, for 1860, afford some interesting results as compared with those of 1850. As they relate to the crop of only a single year in either case, which may have been a particularly bad or good season, and therefore not a fair standard for nice comparison, and as they are open to errors in many other respects,—the details they give us are not to be received with too great confidence; and yet they supply some information which we could obtain in no other way.

FARM IMPLEMENTS AND MACHINERY during ten years past, have been constantly employed to a greater extent upon our Farms. While the surface of "improved land" in the State has been increased less than *one-sixth*, the value of the implements employed in its cultivation, has advanced *one-third*, or in fully a double ratio. This increase is from twenty-two millions dollars in 1850, to twenty-nine in 1860—an increase averaging $700,000 *each year*, expended by the farmers of the State of New-York in new implements and machinery, beyond making up for the wear and tear of old ones. In 1850, our farmers had $177.97 worth of implements, &c., to each 100 acres of improved land, against $202.87 in 1860. In the accuracy of these figures we have no very great confidence, because there must be a great deal that should properly be included under this head, which the farmer does not stop to estimate the value of, when he hands in his census returns; but as they are probably *equally complete at both dates*, we may safely conclude that the *increase* is not overstated. It may be added that our associate, Mr. THOMAS, (see *Rural Affairs*, vol. 2, p. 131,) estimates the value of implements, wagons, &c., necessary for the proper management of a hundred acre farm, all improved land, at $474.50, and this does not include a mower or reaper. The common estimate in England varies from £1 to £2 per acre, or from $5 to $10, and even considerably more where steam machinery is employed.

WHEAT CULTURE.—The number of bushels of Wheat raised in this State in 1860 was 8,861,099, against 13,121,498 in 1850, and 9,092,402 in 1855. The first return of the crops of the State was in 1840, when our wheat crop was 12,286,418 bushels. We fail to see in these figures anything calculated to awaken such fearful despondency as some writers have fallen into with regard to the "decline in our Agriculture." They are *all the figures we have;* anything relative to larger aggregate crops in earlier years, is simply an estimate with no basis of truth to rest upon, and with nothing whatever to *prove* that the average yield per acre *was ever larger than it is to-day.* — — — By the above figures we see that our wheat crop was larger in 1850 than in 1840, although the difference is perhaps no more than enough to prove that we certainly were not *declining;* for the ten years from 1850 to 1860 there is a large decrease, which mainly took place during the first half of the decade, at a time when the great West was in the most rapid course of development, and when at the same time the insects were consuming our crop at a rate perhaps unparalleled before or since. Under the circumstances the only matter of surprise is that our wheat crop has maintained itself so well; and the fact that it has done so, against both Western competition and insect depredators, is something to be proud of rather than to mourn over. — — — And what does the decrease in the wheat crop for the last ten years, amount to? In bushels it is 4,440,399—in dollars and cents probably a little short of $5,000,000. Now the increase in the annual value of the produce of our market gardens, alone, is about $3,400,000; add increase crease in potatoes, rating them at 20 cents a bushel, and, in these two items alone, we have made up the loss in our growth of wheat with five or six hundred thousand dollars over! But every other kind of grain than wheat has increased; against a loss of 4¼ millions bushels of wheat we have *a gain* of over 2 millions bushels of Indian corn, 8½ millions of oats, and over 2 millions in rye, barley, peas and beans.

OUR LIVE STOCK is valued at $103,856,296 in 1860, against $73,570,499 in 1850, an increase of $30,285,797. This is equivalent to a capital invested in Live Stock by our farmers averaging $722 for every 100 acres of improved land in 1860, against $593 for every 100 acres of improved land ten years before. The estimate of Mr. THOMAS (see above reference to *Rural Affairs*) was $1,010 per 100 acres as the necessary investment for Live Stock, and the English estimates run all the way from £2 to £6 per acre, or from one to three thousand dollars per 100 acres. — — — Our Milch cows have increased in number more than one-fifth; working oxen and other cattle, as well as sheep and swine, have fallen off, but the value of animals slaughtered has nevertheless increased fully *one-sixth*, and our production of Butter has been enlarged *almost* 30 per cent. The quantity of cheese made, shows a small decline. Taking the equivalent in cheese and butter, and comparing the total production with the reported number of milch cows in the State, we have 103.4 lbs. of Butter as the average production per cow in 1850 against 106.1 lbs. in 1860—a small change, but, such as it is, in the right direction.

IS THE CHARACTER OF OUR STOCK IMPROVING?—We think the Census returns afford ample proof of a gratifying change in this direction—a change showing that where we have discarded in number, we have advanced in quality. While the total number of live stock of all kinds, is returned at only 6,006,494, in 1860, against 6,797,109 in 1850—a decline of nearly 800,000 head, or more than ten per cent., the value is reported as aggregating a sum 40 per cent. greater than ten years ago. Throwing the horses out of the calculation, we have 5,501,206 cattle, sheep and swine in 1860, against 6,349,132 in 1850, or a reduction of over 13 per cent.; but the account with them stands as follows:—

Value of Animals Slaughtered.	1860,	$15,841,418	
do. do.	do. 1850,	13,573,983	
Increase,			$2,267,435
Value of Butter at say 15 cents per lb.,	1860,	$15,464,591	
do. do.	do. 1850,	11,964,914	
Increase,			3,499,677
Increase in Meat and Butter obtained,			$5,767,112

CONTRA—Decrease in Wool grown, 616,828 lbs., say at 40 cents to give a liberal valuation.....	$246,731
Decrease in Cheese, 1,193,125 lbs., say at 6 cents,.....	71,587
Decrease in Wool and Cheese,.....	318,318
Net increased Annual Revenue from the Live Stock of the State,.....	$5,448,794

In other words, take cattle, sheep and swine altogether, and they yield us a dollar a head all around better than ten years ago, and an aggregate five millions and a half of dollars greater, while we have nearly a million of them less to look after. If there is any reliance whatever to be placed on our Census returns, and even allowing that in some unaccountable way the census-takers of 1860 may have been animated by a spirit of exaggeration which did not influence their predecessors in 1850, we cannot yet avoid the conclusion that our breeders of improved stock have done a vast work for the Agriculture of New-York during the decade just concluded.

As an illustration in detail, of the facts represented above in gross, take the sheep: We deduct above for a diminished yield of wool, but the figures prove that it is now a *much better yield per head* than in 1850. The number of sheep reported, young and old, together, in that year, was 3,453,241, yielding 10,071,301 pounds of of wool, or an average per head of 2.91 pounds. In 1860, there was a total of 2,617,855 sheep, and a yield of 9,454,473 pounds of wool, an average per head of 3.61 pounds; and a comparison of these figures shows what is almost a remarkable coincidence, between the ratio of decreasing numbers and increasing weight of fleece—the sheep showing a decrease of 24 per cent. in number, and the wool an increase of 24 per cent. in weight, per head. Thus while the number of sheep has fallen off about *one-fourth*, the actual yield of wool only exhibits a reduction of something less than *one-sixteenth*.

We derive the foregoing conclusions from the abstracts of the Census returns of this State (Agricultural) to be published in the forthcoming Volume of the Transactions of the State Ag. Society. Col. JOHNSON has prepared to accompany them, the table quoted below, showing an

INCREASE IN THE FOLLOWING AGGREGATES AND PRODUCTIONS SINCE 1850:

Improved acres of land,	increase in 10 years,	.....	1,972,427
Cash value of farms,	do.	.....	$248,796,951
Value of farm implements,	do.	.....	$7,081,769
Horses, number of,	do.	....	56,721
Asses and mules, number of,	do.	.....	590
Milch cows, do.	do.	.....	192,310
Value of live stock,	do.	.....	$30,285,797
Rye, bushels,	do.	....	638,702
Indian corn, bushels,	do.	.....	2,202,648
Oats, bushels,	do.	.....	8,622,319
Tobacco, lbs.,	do.	.....	5,681,393
Cotton, lbs.,	do.	.....	280
Peas and beans, bushels,	do.	.....	867,698
Irish Potatoes, bushels,	do.	.....	11,049,027
Sweet Potatoes, bushels,	do.	.....	1,895
Barley, bushels,	do.	.....	601,608
Buckwheat, bushels,	do.	.....	1,942,350
Orchard, products,	do.	.....	$2,064,430
Wine, gallons,	do.	.....	52,232
Market gardens, value products,	do.	.....	$3,381,596
Butter, lbs.,	do.	.....	23,331,185
Clover seed, bushels,	do.	.....	18,710
Hops, lbs.,	do.	.....	7,119,243
Flax, lbs.,	do.	.....	573,899
Maple sugar, lbs.,	do.	.....	458,974
Molasses, gallons,	do.	....	55,312
Molasses, sorghum, gallons,	do.	.....	265
Beeswax and honey, lbs.,	do.	.....	734,240
Value of animals slaughtered,	do.	.....	$2,267,438
Population,	do.	.....	783,334

Decrease of the following productions since 1850.

Working oxen,	number,	.....	97,807
Other cattle,	do.	.....	39,569
Sheep,	do.	.....	835,286
Swine,	do.	....	108,074
Wheat, bushels,		.....	4,440,399
Wool, lbs.,		....	616,828
Cheese, lbs.,		.....	1,193,125
Hay, tons,		.....	164,011
Grass seeds, bushels,		.....	14,821
Flax seed,	do.	.....	978
Silk cocoons, lbs.,		.....	1,515
Home-made manufactures,		.....	$502,486

There are some other facts proven by this table, to which attention might be called. One of them is the large increase manifested (over two million of dollars) in the Orchard products of the State. Another is the revival of the potato crop, owing doubtless to the gradual diminution of losses from the rot: the potato crop of the State in 1840 was reported at 30,123,614 bushels; in 1850 it was scarcely one-half as large, viz., 15,398,362 bushels; in 1855 it was still somewhat smaller, 15,191,852 bushels; but during the five years to 1860 it had taken a new start, and amounted by the census of that year to 26,447,389 bushels.

It will also be noticed that there is an increase in the area rated as "improved land," amounting to nearly two millions of acres for the past ten years, or 16 per cent. upon the 12,408,968 acres reported under this head in 1850. We have been at the pains to make a careful money estimate of the items in the above table, showing an increase and decrease respectively, with the details of which we need not now trespass upon the patience of our readers. Suffice it to say, that the net pecuniary returns of the agriculture of the State, are thus proven to have increased in just about the same ratio as the extent of land which we are cultivating—showing conclusively that if the returns of our crops per acre are not enlarging as we wish they might, we are fully keeping them up on our old lands, and constantly adding a considerable surface every year to their extent. This, it must be added, is done—probably by the aid of our improved machinery and implements—with little or no addition to the *farming population* of the State, for that is nearly stationary, the increase of three-quarters of a million during the past decade having been confined almost wholly to the enlargement of our cities. The exhibit, on the whole, should therefore be considered a gratifying one to the Farmers of the "Empire State."

[For the Country Gentleman and Cultivator.

REMEDY FOR FOOT ROT.

Last spring my sheep were very much troubled with the foot ail—some of them were so bad that they lay down all the time. Not knowing at the time what to do for them, I merely washed their claws with castile soap, and then rubbed tar on their hoofs. I soon found this done them no good, and I then turned to a back number of the COUNTRY GENTLEMAN, where I found a correspondent recommend the chloride of lime for this disease. I immediately procured the article, and after two or three applications their feet were perfectly well. I see no reason why this remedy would not be equally good for the diseased feet of cattle. The information given me by this little recipe was worth far more than a year's subscription to your very valuable COUNTRY GENTLEMAN.

New Castle Co., Del. G. S.

[For the Country Gentleman and Cultivator.]

REMEDY FOR FOOT AIL.

I noticed in the last number, a remedy from W. G. W. for what he calls "foot ail in cattle." I conclude that he means the foot ail that is frequently called "fowls," being a disease between the hoofs, and in some sections is very troublesome. Let those so troubled treat the disease as they would the *itch*. Make an ointment—half an ounce red precipitate, mixed with four ounces lard, and apply it to the diseased parts. One thorough application will be sufficient. It can in most cases be done by rubbing it in between the hoofs with the finger with but little trouble. S. S. W. *Herkimer Co., N. Y.*

THE MULTIPLICATION OF WEEDS.

On all parts of the landowner's premises weeds are now beginning to ripen their myriad seeds. Very few can say they have none. And while they have any at all to increase and multiply, it is hard to say how many millions there may be another year. These remarks apply more particularly to annual weeds, increasing solely by their seeds.

We have just made an examination of the number of seeds which some of the more common annual weeds ripen on a single plant. The green Foxtail grass varies from 3,000 to 4,000 seeds; the brown Foxtail 1,000 to 2,000; the cock's foot Panicum about 2,000; the Rag-weed, or Ambrosia, often 15,000; the Pigweed or Amaranthus, 5,000; and the Lamb's-quarters, also called Pigweed, (chenopodium,) often at least 20,000. We lately rode past a "garden" where there were plants of the latter at least seven feet high, and the number of seeds which each bore must have been at least 50,000 to 100,000. *A single plant would thus seed ten acres*, allowing one plant to every two feet square! Many farmers wonder where all the weeds come from—they cannot conceive how so many should have become mixed through the soil, and some consequently insist that they grow without seed, spontaneously. Let us examine a moment, and see if so improbable a cause is necessary to account for their vast numbers:

In a late number of the COUNTRY GENTLEMAN a series of recent experiments by one of the editors is given to show that by burying such coarse seed as wheat six inches deep, they would scarcely grow; and beans at that depth would not grow at all. When we come to such small seeds as those of pigweed, foxtail, &c., where from 20 to 50 are required to equal the bulk of a single grain of wheat, we may at once perceive that they would not vegetate unless very near the surface. The soil might therefore contain a vast number in a dormant state, ready to spring into wild luxuriance, as soon as the plow throws them up to the surface.

But if the soil were so full of these seeds, would we not at once perceive their presence all through it in working it with the plow, spade or hoe? Let us look a moment at this question. A bushel of pig-weed seed contains over 50,000,000—10,000, as we have shown, would seed an acre, or a bushel 5,000 acres. But we will be extravagantly liberal, and give a bushel to only one acre—enough for a dense growth of eight plants to every square inch. Yet a bushel is only one-twenty-thousandth part of the bulk of the soil on an acre of ordinary depth; hence there may be fifty million pig-weed seed all through an acre of soil, yet constituting but a twenty-thousandth part, and quite imperceptible even to close observation. No wonder then that whenever the soil is turned up to air and light, these numberless seed start into germination, and the whole surface is soon covered with a close green growth.

Their number is almost beyond estimate. Their increase is incredible. Every farmer who passes by a single weed should know what figures say of the increase it may occasion. Take the lowest number we have given for the product of seed on one plant, or only 1,000; next year, 1863, it may be 1,000,000; in 1864, 1,000,000,000; in 1865, 1,000,000,000,000. This will do for three years—our young arithmetical readers may carry out the calculation for the ten years if they wish.

This, altogether, looks formidable. The best way, however, to conquer an enemy is first to know his strength. Such a thing has been done as clearing a farm of weeds, and it may be done again. Plowing, harrowing, careful cultivation, well conducted rotation, seeding to grass, &c., have performed wonders on the farm at large; and the hoe, spade, and thumb and fingers, have been as successful in the garden. The great error which most have committed, as we have elsewhere remarked, is in not making the war one of complete extermination. A very few stragglers are enough to increase and multiply. If a farmer has a ten acre field of weeds, and if he succeeds in destroying ninety-nine hundredths, he is satisfied; he thinks he has done the thing up brown. But in a year or two he has the same operation to go over again. It would be far more economical, and save also a great injury to an otherwise half smothered crop, to finish the job up completely and totally—search and re-search till the last solitary straggler is demolished. This is especially so with gardens. Let nothing go to seed—hunt for the last one—the soil will soon be worked clean, and labor will be essened, and crops greatly increased. But the price of freedom [from weeds] is eternal vigilance.

[For the Country Gentleman and Cultivator.]

THE BORER IN APPLE TREES.

I wrote a piece for THE CULTIVATOR two years ago, in relation to an apple tree which had been much injured by the borer. I will now state in addition to what I then wrote, that the tree is alive and doing well, and has some apples on it the present season. I applied last summer a composition of grease and tar from wagon axeltrees, and I think it answers a good purpose to keep out the water from the tree where the bark had been removed; and by washing the tree two or three times a year with soft soap and lye, the bark is kept smooth and healthy, and free from insects.

I will further add that five years ago I obtained 100 apple trees from the nursery of John R. Comstock of Washington, Dutchess Co., N. Y., for Jeremiah Fuller of Kent, Conn. They are healthy, fine looking trees, and doing as well as any I have seen of the same age. Some of the trees will yield from a peck to half a bushel of apples this year. They have been washed with soap and lye twice a year, which has given them a very healthy appearance. The field has been plowed and manured every season until last spring, when it was seeded with clover after winter sown wheat. I applied a shovel of leached ashes around the trees last spring, which I think is a good thing for young apple trees. JOHN R. BLAIR.

P. S.—I think common grafting wax—(rosin, bees-wax and tallow,) mixed with a little tar, would be a good application where the bark has been removed on account of the borer. J. R. B.

To Cure Kicking Horses.

In No. 13 I noticed an inquiry about a kicking horse. If the horse stands between two partitions, bore a two-inch hole in each, on a horizontal line, about one and a half inches above the horse's hip; put a round stick in the holes, and put a pin in each end of the stick, so that it will not fall; tie the horse pretty short, so that he will not back too far. He will try to kick, but will not be able. After a few ineffectual efforts he will give it up. After one or two years of such treatment the horse will be cured. The horse cannot hurt himself, for the stick is too near his hips. I have two mares that used to kick. I tried this plan and cured them.—*J. R., in Rural New-Yorker.*

The Government and Products of Nicaragua.

The Hon. A. B. DICKINSON, our Minister to Nicaragua, has kindly favored us with the following reply to a letter addressed to him by a gentleman of Wisconsin:

LEON DE NICARAGUA, July 16, 1862.

JOHN R. WHEELER, Esq., Columbus, Wis.:

DEAR SIR—Your letter dated May 21st, 1862, asking a number of questions concerning Nicaragua, is received. I proceed to answer them as follows:

1. There are a few citizens of the United States scattered through Nicaragua, engaged in trade and agricultural pursuits—two or three at Leon.

2. Citizens of the United States can engage here in commerce or agricultural pursuits with as much safety as those of this country. The Republic has been at peace and gradually improving for the last five years, during which all kinds of business have been carried on with as much safety as in any part of the world. Murders and robberies are of rare occurrence. No country in the world is more exempt from them than Nicaragua. Political revolutions have been the bane of the country. But under the wise, just, and firm administration of General Martinez, who is now President, and will probably be re-elected this fall for another term of four years, there is nothing of the kind to fear.

3. Sugar, cotton and coffee, all of excellent quality, are cultivated and exported in limited quantities. Sugar and coffee to Liverpool and San Francisco—cotton to New-York, Liverpool and Havre. No improved implements of husbandry have yet been introduced, but I have ordered some, and shall see that they have a fair trial. Sugar mills, cotton gins and coffee hullers are introduced to a limited extent, but are not in general use.

4. Several species of the American Agave are cultivated for home consumption. A species called "*cabuya*," is grown in almost every garden, and flourishes in great abundance and perfection. Nothing seems to injure or destroy it, but every leaf attains a strong and perfect growth. It can be raised very cheaply, and in any quantity desired. The fibre is similar to that of hemp. It is made into cordage, twine, hammocks, and many other things, but is principally used in the country. The *pita* is a finer species, bearing to it about the same relation that flax does to hemp. No machinery is used in the extraction of the fibre, or in its manufacture, except the rude implements of the country, which were probably in use before America was discovered. With proper machinery its cultivation and manufacture for exportation would undoubtedly be a most excellent business.

5. Tropical fruits, such as oranges, lemons, pine apples, bananas, plantains, &c., grow here fully equal to any in the world, in quantities literally inexhaustible; but very few are exported.

The Panama railroad company run a semi-monthly line of steamers up and down the Pacific coast, from Panama to Guatemala. Transient vessels occasionally touch at these ports, but cannot be relied on.

6. Labor can be obtained at moderate cost, but I cannot say that it is either industrious or reliable. The natives are not very steady workers.

In short, nature has provided all the means to make this a most excellent locality for agricultural, mining, manufacturing and commercial pursuits, but man has as yet done but little to develop the resources of the country. Active and energetic business men with a little capital can do well here at any of the pursuits above indicated. The transit route, between the two oceans, through Lake Nicaragua is now being re-opened, and will add greatly to the business facilities of the country.

Your 7th, and last inquiry, is whether I had changed my views in regard to a remark which I made in my address at Buffalo, to the effect that I would not advise a farmer to settle in any country where he could not have plenty of good pasture.

I answer that I say so still: First, for the reason that in all countries where grass grows well, the cultivator of the soil has all the material on his own farm to increase its fertility to any extent he chooses; and secondly, because if he has no pasture, he has no good butter, and if he has no good butter, he has no good beaf-steak, mackerel, shad, stewed potatoes, or oysters, broiled or fricaseed chickens, short or buckwheat cakes.

In short, a farmer that has no pasture has no hay, milk or butter, without which he is no true farmer, as he produces nothing that brings either man or beast to perfection.

Central America has naturally a productive soil, which has been sustained and renovated for hundreds, if not thousands, of years by the outpourings of her numerous volcanoes, yielding in great perfection and luxuriance such products as are congenial to it, including Indian corn, but you can judge of the quantity and quality of its grasses from the fact that the best cattle of Wisconsin, and other western, as well as eastern States, are worth in the New-York market from $50 to $75 per head every week in the year, to ship to the Bermuda market, while the best cattle of all the Central and South American States are worth in their home markets from $4 to $8 per head, and thousands of them within but four or five days' further sail from the Bermuda Islands than the New-York market. Yet the hides of the latter are equal to any in the world, according to their weight, as they are exported to all parts of the civilized world; while the beef in carcass is worth only one and two cents per pound; and yet the tallow is worth twelve and fifteen cents per pound. The average price for three and four year old steers, was below $4 per head in United States currency, at the great fair at San Miguel last fall.

As a farmer, I prefer good grass land to all the luxuries of the tropics, including cotton, coffee, indigo, tobacco and rice, without it. A. B. DICKINSON.

DIRECTIONS FOR CIDER-MAKING.

The following extract is made for the COUNTRY GENTLEMAN, from a report on Apples and their management, submitted last year by a committee of the Hampshire (Mass.) Agricultural Society, of which Mr. DAVID RICE was Chairman:—

Good cider cannot be made from inferior, or decayed, or worm-eaten fruit. The apples should be ripe and mellow before they are ground out in the mill. They should be mixed, sour and sweet, in about equal proportions when carried to the apple heap. After the fruit is ground in the mill the pomace should stand in the vat a day or two, being frequently stirred with a wooden shovel. Being thus brought into contact with the air, the cider will have a fine rich color, and a better flavor, acquired by the digestion of the apple skins, which contain a fragrant oil, and by chemical changes wrought in the cider proper by atmospheric influences. The cider should be stored in well-cleansed barrels or casks, and put into a dry, cool cellar. After fermentation has quite ceased, the barrels or casks should be hermetically closed. No foreign substance should ever be added to cider with the idea that it can be improved or made better thereby. Those who wish to poison their cider by chemicals will bear in mind that when they do so their cider becomes a *medicinal tincture*, unfit for a beverage, or to use in any way unless prescribed by a physician. Cider will keep fit for use much longer if bottled soon after the vinous fermentation has ceased.

[For the Country Gentleman and Cultivator.]

CULTURE OF WHEAT.

Deep and Shallow Plowing for Winter Wheat.

I have heard some farners argue that winter wheat requires a deep, mellow soil, and to prove their theory, they would adduce instances in which the roots of wheat plants have been followed downward several feet deep. I have my mind on an instance where a well-digger traced the roots of a wheat plant over four feet into the earth. There appeared to have been in former years in that place, a large hole or excavation, which had been filled up with super soil, and had never become very compact; and the wheat struck its roots downwards almost as far as the stems grew upwards.

The theory of plowing deep for winter wheat would be a good one, if we did not have the frosts of winter to contend with. The roots of the wheat plant are not elastic, like India rubber. If they were, winter wheat would not be very much injured by the freezing and thawing of the soil.

Every intelligent farmer knows that when the soil freezes it is expanded; and as the expansion must nearly all be *upwards*, plants are sometimes lifted from one to two inches, i. e., the surface of the super soil is from one to two inches farther above the subsoil, than it is when it is not frozen. Of course, this expansion lifts the plants with it, and if the roots have struck downwards farther than three or four inches, they must be severed between the frozen and not frozen soil. But in case most of the roots have shot out in nearly a horizontal direction, the plants and roots will all rise and settle back bodily, as the soil freezes and thaws, and but very few of the roots will be broken off.

Now, when the soil is plowed deep for winter wheat, the roots must necessarily strike deep downwards in order to obtain sufficient nourishment, unless the entire soil is filled with vegetable matter and manurial substances for nourishing the young plants. But when the large proportion of vegetable matter and manure are near the surface, the roots all spread out nearly in a horizontal direction, forming a kind of mat or tender sod, which all rises in a body when the earth freezes, without severing any of the roots, except those few that have struck downwards beyond the super soil.

It will be discovered in the first experiment that the plowing was shallow and the crop a good one. In the others, the plowing was deep. In the first, all the vegetable matter and the manure were near the surface of the ground, resting on a solid bed of subsoil. In the latter cases, all the vegetable matter—or most of it—was buried five or six inches below the surface. In the first instance, the roots of the wheat plants, as the vegetable matter and manure were at or near the surface of the ground—did not strike deep into the soil, but spread out almost horizontally. Therefore, when the soil expanded by freezing, the plants were not lifted *out of the soil*, but were lifted with it, and settled back again with the soil when it thawed. In the latter instances, the roots struck directly downwards, to the vegetable matter, and then branched off in a horizontal direction; and when the soil came to freeze, the plants were lifted out, and in many instances, the roots were severed a few inches below the surface of the ground, after which it would require but a few times freezing and thawing to lift them entirely out of the ground.

I passed over various parts of the field, where the second experiment was conducted, in February and March, and in most parts of the entire field, even where it was thoroughly under-drained, the rows of wheat, as it was drilled in, were all lifted out by the frost, the roots being five or six inches in length, resembling the roots of red clover; and they looked as if they had all been pulled up carefully by hand, and laid down in order where they grew.

These experiments satisfied me that deep plowing is not the best way to prepare ground for a crop of *winter* wheat, unless the plowing is done with a *subsoil* plow in connection with a super soil plow. The vegetable matter and manure should all be kept within a few inches of the surface of the soil, by plowing shallow; and then, if the compact bed of subsoil can be broken up, and kept beneath the super soil, the soil will be prepared in the best possible manner for a crop of winter wheat.

Winter Wheat Needs Good Manure.

Why will some fields produce a heavy burden of tall straw, and but very little grain? Because there is a deficiency of grain-producing material in the soil. Poor manure will make straw, but it will not produce much wheat. For this reason, those farmers who feed out but little grain, and who make but little manure from stock that consume grain, do not, usually, raise very good crops of winter, or even spring wheat.

I have observed that those farmers who feed out much grain, and take care of their manure, usually raise good crops of wheat. And, here is the great secret of the good success of many farmers in growing winter wheat—they make a large quantity of manure which is rich in wheat-producing substance. Those farmers who feed much oil meal, when they save their manure, and apply it, almost always raise good wheat.

Another very important consideration is, the manure should be well rotted, and should be spread thin over the surface and harrowed in. I think it is better to *harrow* it in than to plow it in, as if plowed in, it is liable to be buried too deep.

According to my experience, wheat requires but little manure, which should be in a more concentrated form than is necessary for Indian corn.

For this reason, guano, hen manure, or the manure of swine, spread very thin, is far better than common barn-yard manure, for producing a good crop of wheat. And this is specially the case, where there is a good supply of vegetable matter in the soil. Where the soil will produce large straw, no barn-yard manure should ever be applied for raising wheat. Poudrette, guano, or some other concentrated manure should be used in such places, and the barn-yard manure should be applied where there is but little vegetable matter in the soil.

Preparing Seed Wheat

Is a part of wheat-growing which is too much neglected, and many times too, by good farmers. Seed wheat should seldom be taken from that where the entire crop has all been thrashed together, unless it is all extra good, because there is usually, even when the crop is a good one, much of the grain that ought not to be used for seed. If farmers would take the same care in saving seed for a crop of winter wheat that they do in saving Indian corn, there would be a great improvement in that crop.

Seed wheat ought to be saved with as much care as Indian corn; and, when it has not been, it may be greatly improved by running it twice through a good fanning mill, and by turning it very rapidly, so as to blow out much of the small grain. Like produces like; and small shrunken kernels of wheat will not produce large plump heads any more than we can expect to obtain a good crop of Indian corn from poor half ripened and shrunken seed.

Early and Late Seeding.

For more than twenty years past I have taken observations particularly on this subject, and I have come to the conclusion that the earlier in autumn winter wheat can be put in, the better the crop will be, because if put in early it will become more firmly rooted, and will, consequently, resist the freezing and thawing during winter and spring much better than it will if it is sowed late, and has but a few weeks to become rooted.

I have never been able to perceive that the wheat midge would injure the early sowed wheat, on the next season, any more than they would that which was put in a month later.

I have often observed that wheat that was put in on the first of October, would ripen as early in the season as that sowed on the first of September. The chief object in sowing winter wheat early in September, is to allow it time to become well rooted, so that it will not be lifted out by freezing and thawing in winter, as much as it would if it was sowed late in the season. S. E. Todd.

[For the Country Gentleman and Cultivator.]

A Sample of Massachusetts Farming.

Messrs. Editors—I recently made a hasty visit to the beautiful country residence of H. G. White, Esq., of South Framingham, Middlesex Co., Mass., and now send you a few notes of the observations made at the time, and information obtained since, concerning Mr. White's mode of agriculture, stock breeding, &c.

Mr. White's Farm

Consists of about 150 acres, is one and one-fourth miles in length, with the buildings near the centre, a public street crossing in front of them and the Concord river a short distance in the rear, while a private road runs through nearly the entire length of the lot. The farm buildings, which are nearly all new, are neatly and conveniently arranged on the private road, in a long row receding from the public street, with a separate apartment for each branch of the business, and are all models of their kind. His stock barn, horse stables, grain house, hogery, henery and carriage establishment, are each worthy of special notice.

From his dwelling-house, itself a picture of comfort, the view in front is terminated at one extremity of his luxuriant meadows, in a lovely little lake, while his cottage for the farm laborers, with his sheep-folds and barn upon a beautiful hill at the other extremity, surrounded by the grazing flocks and sporting colts afford a lovely back ground to the charming scene. So much taste, elegance and beauty, combined with so much practical utility, is rarely seen on one estate, and forms a fitting type of the home of the true American "country gentleman."

The farm produces about sixty tons of hay, forty tons of other fodder, and from 3,000 to 5,000 bushels of roots, mostly mangold wurzel. Seven acres are this year cultivated with root crops, among which Goodrich's seedling potatoes were prominent, the Garnet Chili having the preference. I noticed a mowing machine, the Victory, manufactured at South Hadley Falls, which appeared to give entire satisfaction. It is a new machine, all iron, of simple construction and less liable to clog than most others. Mr. White said it cost but $65, and he considers it the best yet in use in his section; also a hay tedder, manufactured at New Braintree, which cost $70. This Mr. W. says, "is a most admirable implement, doing the work of eight men in a better manner than they could perform it, and is second to none ever invented for farmers' use." This was followed by Stoddard's horse rake, simple, effective, durable, and easily worked, requiring less outlay of strength by the operator to throw it in and out of geer than any similar machine within my knowledge —cost $35. Fairbanks' platform scales, situated near the barn, give the exact weight of every load of hay, which, with that of all the roots, as well as the weight at frequent intervals, of nearly all the live stock, is carefully recorded for future reference.

The garden contained a choice assortment of the smaller fruits, including strawberries, among which I noticed that Hovey's seedling, so long the most popular in the vicinity of Boston, is giving way to the Triomphe de Gand, as the best for family use—raspberries, Brinckle's Orange and Belle de Fontenay are favorites—blackberries, the Dorchester having the preference; gooseberries, and a great variety of currants, of which the White Grape takes the precedence, all trained in the tree form, well filled with fruit exceedingly large and fair, and dwarf pears, of which there were some superb specimens of trees heavily laden with fruit.

Short-Horn Cattle

The leading feature of the establishment is its herd of Short-Horns, and Mr. White gives more of his personal attention probably to this than to any other branch of his business, and appears to take a deeper interest in it. Having the most unlimited confidence in the ability of Short-Horns when rightly bred, to produce the very best of milkers, and believing this quality to be the most important for New England stock, whatever may be best for other sections, he is breeding from the best animals he can obtain, connected with the most celebrated families of their line with especial reference to the milking qualities of the animals produced, making this his principal object, while at the same time he endeavors to introduce as much symmetry as will be consistent with this object. For instance the bull Duke of Worcester, No. 3896, which he has recently disposed of, was from a long line of deep milkers, being sired by Double Duke, 1451½, out of Cara, which Cara has given an average yield of 23 2-3 quarts of milk per day, beer measure, during the month of June, the largest yield in any one day being 26 ⅓ quarts, and has produced from seven days milk 18¼ lbs. of butter, and from ten days milk, 26½ lbs., the feed being grass fresh cut and fed in the stall, except on rainy days when not convenient to cut grass, her feed was three quarts of flax seed meal per day mixed with hay.

Among the heifers, Dora Haines, by Marmion, 1843, out of Anna, for which the first prize was awarded at the N. Y. State show in 1854, in the class of cows and heifers from other states, attracted especial attention, being of a beautiful roan color, and the most perfect symmetry; also Laurestina 2d, by John Bull, 3025, which was sold last year in California for $3200, also a handsome roan color, a fine heifer; and Lady Lathrop, by Young Monarch, 3605, out of Lady Sale 5th, from whose milk for one day in March last, two lbs. and two oz. of butter were obtained—a beautiful red color, large and symmetrical. Among the calves worthy of especial notice, I would mention Red Rose 9th and Myra, both by Marmion, 1843, Highland Maid 2d, and Juliette, both by Highflyer, 578, and Dora Haines 2d, by Duke of Carlisle, 3850. These were all beautiful calves, and will undoubtedly make superb milkers.

Mr. White is breeding the present season from Commodore, No. 3777, by imported John O'Gaunt 2d, bred by F. W. Stone, Esq., of Canada West, a noble specimen of a bull, descended from a long line of deep milkers. Thus he is endeavoring to rear on New England soil, a herd of cattle whose pedigree shall be unrivalled, and whose qualities shall be best adapted to New England wants, and he has selected the Short-Horns to breed from because he believes more good qualities are combined in them than in any one other breed.

Cotswold Sheep.

Mr. White has a fine flock of sheep, consisting of about 150, including lambs, all pure bred or high grade Cotswolds. He is at present breeding from animals from the the stock of the Messrs. F. W. Stone and John Snell of Canada West. His main object is to produce mutton, and although the quality of that from Cotswolds is inferior to that from South-Downs, which he has formerly kept, yet the quantity is so much greater that at present prices, he finds the former much more profitable.

His method of keeping sheep in winter is to have them

in lots not exceeding 50 each, with shelter and the privilege of running in and out at pleasure, with plenty of pure water and rock salt constantly by them, and feeds with straw in the morning, poor hay at noon, and good hay at night; between the first and second foddering a gill to a half pint each of grain, usually wheat and oats grown together, or equal quantities of corn and oats, according to size and age; and between the second and third foddering two quarts of sliced turnips each. Believing in variety as well as regularity in feeding sheep, he thus varies their food as much as the means at command will allow. After the ewes drop their lambs he substitutes mangolds for turnips, increases the quantity of grain somewhat, and introduces a proportion of wheat shorts, which he finds excellent for increasing the flow of milk.

Mr. White's system of marking and registering sheep, original, I believe, with himself, is very simple and yet the most convenient and effective I have seen. A little piece of copper about the size and form of the new cents, is attached by a split steel ring to the ear of the sheep through a hole made on the under side near the head with a common shoe punch; a number is stamped on this bit of copper, that of the sheep bearing it, or perhaps two numbers, including that of its dam. In a book prepared for the purpose, a record is made of everything of interest pertaining to the sheep with correspondiug numbers, so that at any time, by noticing the number any sheep bears, and turning to the corresponding number in the register, the pedigree, age, history and qualities of the animal may be readily ascertained.

Mr. W. has been very successful in raising sheep, and thinks it singular that sheep husbandry should be so much neglected by our Massachusetts farmers, when there is so much money to be made by it, and when they may be so easily and frequently turned, compared with any high priced cattle.

Mr. W. has two beautiful brood mares, one a roan Morgan, and the other a grey Messenger, both with foal, and some very fine colts from Black Hawk stock, one from Cassius M. Clay stock, and one from the imported horse Balconnie, splendid creatures.

The swine pens were well filled with pure Chester county stock of the Thomas Wood family, with which Mr. W. now proposes to cross the Paschal Morris stock. He thinks from his past experience, that for general use among our farmers, a cross of pure Chester county with smaller sows, say Suffolk, would be a good cross.

The henery contained a large flock of the Bramah fowls, which are represented to be good layers of rich eggs, good nurses, not inclined to ramble, and make good weight at an early age. A flock of the most beautiful pigeons I have ever noticed, added to the variety and liveliness of the scene. Mr. W. pursues Mr. Quincy's system of soiling, which he commenced three years ago with three head of cattle, and now continues with twenty head. The crops used for the purpose are grass, green oats, clover and green corn; all connected with a portion of dry hay every day. His mangolds last until June. He is now constructing a root cellar with a capacity sufficient for 5000 bushels, with a building over it for tools.

Mr. White's hospitality and powers of entertainment are fully equal to his skill in breeding stock and cultivating the soil; and in this department he has a most excellent help-meet in the person of Mrs. W., who made herself as much at home among the crops and flocks and herds, as in the drawing room, and exhibited an acquaintance and familiarity with them all, rarely seen among American farmers' wives or daughters, and all without losing one particle of the true dignity of a real lady.

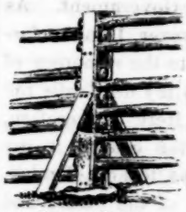
Fitchburg, Mass., Sept. 1852. W. G. WYMAN.

Curious Freak of a Pear Tree.

Mr. PRATT, one of my neighbors, has a small pear tree that bloomed and set fruit at the regular time, and in June blossomed again and set more fruit. At this time both are doing well. The last are set on this present year's growth. A. Moss. *Belvidere, Ill., Aug.*, 1862.

CHEAP FENCE AND GOOD FARM.

In a recent visit to the fine farm of WM. P. & E. L. THORNTON, (who occupy 200 acres formerly owned by Col. Sherwood, near Auburn,) they showed me a cheap and good farm-fence, a description of which may be useful to the readers of the COUNTRY GENTLEMAN. It is made of split rails, and a common worm-fence may be converted to one of this sort. It is composed of six rails for each length, and is five feet high. It occupies more space than a post or board fence, but much less than a worm fence. The accompanying cut will show the mode of construction, and represents the place where the two lengths or rails meet.



CHEAP FENCE.

The uprights, which hold the rails to their place, are simply two sawed strips of wood, about five inches wide, an inch and a half thick, and five feet long, the length being equal to the height of the fence. They are connected by nailing blocks between them, leaving them about five inches apart. One of these blocks is at the bottom, the other within about a foot of the top. On the latter, the three top rails rest. Three large nails are driven at each place into the blocks. The fence is kept upright by a brace on each side, which also serves as an additional security in holding the uprights together. These braces are five feet long, about 18 inches of the lower end entering the earth. Three large nails secure the upper end to the uprights. They may be of sawed stuff, or split like common fence stakes. The lower ends of the uprights rest on a flat stone. It will be observed that no part is subjected to decay, except the braces, the lower ends of which enter the ground. These will need occasional renewing, unless of durable wood. All the rest will last as long as the rails, or thirty or forty years. If the nails, before using, are dipped in hot greese, oil, or gas tar, they will not rust for a long time. The braces should press against the uprights about three feet high.

A water ram, on this farm, has been in successful operation about 15 years; it needs opening about once a month, to restore its action, requiring ten minutes each time. Once in about four years, it needs new leather to the valves. The drive-pipe is iron, three inches in diameter, drives a full stream through a three-quarter inch conveying pipe, and is capable of driving a much larger stream. The water is obtained from an open stream, but no inconvenience ever arises from the sediment which passes through it.

The barns on this farm are capable of stabling a hundred head of cattle, although only about thirty are at present kept. They are all housed through winter and till pastures have well grown late in spring. Much straw is thus worked up into manure, which is applied to the land; in addition to which large quantities have been drawn from the city, costing, when drawn, one dollar per load; a thousand loads have been bought in four years. The surplus straw is sold at four to five dollars per load, but is considered as worth more where it can be converted by cattle to manure. J.

RAIN IN CALIFORNIA.—According to a rain gage kept at Fort Gaston, Klamath Co., Cal., by Dr. C. A. Kirkpatrick, the fall of rain at that point from September 16, 1861, to June 18, 1862, a period of nine months, reached the enormous amount of 129 inches, and a fraction over! Only think of ten and three-quarters feet of rain in nine months.

[For the Country Gentleman and Cultivator.]

Interesting Letter about our Southwestern Territories.

Sioux City, Iowa, August 6, 1862.

Messrs. Editors—After more than a year's time, in which I have abandoned formal attention to the farm pursuits, for which I endeavored to prepare myself measurably in not only the perusal, but the study of your paper, I still find myself in the service of the Government. As a devotee to the farming interests, however, I do not forget to gather up all the light I can, as to the resources of these Western Territories, as often as my duty calls me upon the plains and river bottoms. Here is, therefore, the result of my observations upon the country in my journey from Fort Leavenworth, Kansas, to Fort Randall, Dakota Territory, both on the banks of the turbid and turbulent Missouri river.

The plains or prairies of Kansas, Messrs. Editors, I can safely say, are not so thoroughly suited to agriculture as one would suppose. Whilst one person is made to say, from an experience and observation of twenty years in Kansas, that the drouth of two seasons since was the only exception to prosperous seasons in that time, there are others who will tell you, with no bias one way or the other, that not a season passes that all of Kansas does not suffer from terrible periods of heat, of arid soil and atmosphere, and of the destruction of or injury to crops. The fall wheat has this season proved a successful crop; but the spring wheat and oats were so thoroughly damaged by the hot weather of May, as to be scarcely any crop at all. In June, however, copious rains in the nick of time saved the corn and brought it along finely. Thus the very drouth which, as it were, destroyed the spring crops, doubtless acted beneficially in the rapid maturing of the fall wheat. In progressing westward, a traveller will observe the greater prevalence of hot, parching winds, until at the big bend of the Arkansas river, a climate is entered upon wholly diverse from that of the Valley of the Mississippi. Now this arid climate, which renders the great plains as it were a desert, does at times extend its influences to part of Eastern Kansas. Its proof is in the season of the famine two years since, which found a serious drouth no where much beyond the eastern limit of Kansas. Wheat I am told, is *not* a profitable crop there, nor is it likely to be. My deliberate opinion is, that Kansas will thrive better as a stock-raising State, and chiefly in sheep husbandry; as a proof of that reflection, I find that form of husbandry is beginning to be the prevailing basis of the intelligent farmers of that State. Messrs. Editors, Kansas is not a well wooded State, and it has not yet produced for the market any supply of coal of which I have knowledge; it may have coal beds, but none are worked.

I give you these observations as the true facts of the case have been presented to me, not to detract from the reputation of these Western States and Territories, and prejudice public opinion against them, but to convey to you what I think to be a fair unbiased criticism of the advantages or disadvantages of settling on Western lands. There can be no comparison between Michigan, Illinois, Indiana, and Missouri, on the one hand, and Kansas, Nebraska, Western Iowa, and Dakota territory on the other. The former, for a farmer desirous of a permanent and thrifty home, are immeasureably more eligible.

What the extreme of winter's cold may be in Nebraska I can hardly say; in Kansas it averages about 10° below zero; in Dakota Territory, as far north as Fort Randall, the mercury I am told has been known to fall to 29° below zero. In Nebraska doubtless it is often as low 20° below zero; and when you add to that temperature the shelterless bleak prairies, whether on the bottoms near the river, or on the bluffs and range of hills which border Missouri Valley, it must be pinching cold indeed. Nebraska Territory, that portion bordering the river valley, I am disposed to believe is more reliable in summer climate than Kansas, and yet the scorching winds which blow on the Arkansas, extend their influences even here. What I learn as a curious fact, is that in the drouthy season of Kansas two years since, Nebraska crops were successful; and this season, whilst Kansas spring crops were so seriously affected, the spring crops in Nebraska succeeded well. Timber in Nebraska is not abundant, being less as a general fact than in Kansas, but more at least on the river bluffs than in Dakota. Of these three States and Territories, I have been more favorably impressed with what I have seen of the Missouri bottoms in Nebraska.

Dakota Territory has during the past year received its territorial organization and government. Its south-eastern limit is the Big Sioux river. The valley of this river is likely to settle up with emigrants from Western Iowa and from Minnesota, and I am assured that emigrants are now preparing to remove to the eastern and south-eastern parts of the territory. I do not think much will ever come of settlement there. Take the valley of Big Sioux river, and the broad alluvial meadows of the Missouri Valley, say for 200 miles from Sioux city to Fort Randall and a distance above it, and you have all that is inviting or eligible in Dakota Territory. The ranges of hills bordering the Missouri river on both sides are bare and bald, almost wholly destitute of tree or bush; and when upon them, and the vision extends interior, the bare hills and swelling prairies are dry and timberless. I am told that in travelling from Bon Homme, on the Missouri, to the British possessions on the north, not a tree can be found except on the narrow border of some stream of water. The view is cheerless and desolate in the extreme.

Most every one is acquainted with the character of the soil composing the bottoms of the Missouri river—where above the annual inundation, it is a fine light friable alluvial soil, unsurpassed for cultivation in this Western world. It needs no drainage, does not clod, but mellows up as nicely as a garden soil of best quality. Its fertility is extraordinary, as is exhibited by the crops I have seen growing upon it, and in the rank growth of weeds or natural products of the land even as far up as Fort Randall. I find that when below Omaha city, the bottoms of the Missouri are densely covered with cottonwood groves, etc.; above that place, as a general rule, the bottoms are more frequently open, prairie-like, and thus more susceptible of immediate cultivation. It will astonish the eastern resident on coming here, to see the ready growth of towns and villages, and their thrifty aspect. Here is a town (Sioux city) on the extreme western border of Iowa, which would do credit to Illinois or Indiana. Omaha city, however, is next to St. Joseph, the most flourishing town I have seen, and when it shall be tapped by one of the branch Pacific railroads, will flourish and increase yet more astonishingly. The embryo towns of Vermillion, Yankton, and Bon Homme, all on the bank of the Missouri river, are yet small, but show what can be done in the narrow space of twelve months. Yankton is the present seat of Territorial Government, and bids fair shortly to be a prosperous settlement.

A reference to the map of Nebraska and that lately published of Dakota, will show here and there large reservations for the Indian tribes—these are generally located upon the finest tracts of land, and retain near the settler's homes a very undesirable population. The Indian tribes in Dakota are still troublesome; depredations and thefts are still the order of the day. A little below Fort Randall are two Indian reservations—on the north that of the Yankton branch of the Sioux tribe, with its agency; on the south near the mouth of the Niobrara or Running water river, the Ponka reserve and agency. At the Yankton agency were numbers of Indian lodges, and I observed large fields of Indian corn under the usual character of *aboriginal* cultivation; that is, more weeds than cornstalks. Fort Randall is protected from settlement (it being still used for military purposes) by its surrounding military reserve. Beyond it there is little or no settlement; all is wild Indian country, over which it is yet unsafe to travel. Journeying from Sioux city to Fort Randall, the trend of the Missouri is nearly due westward. In consequence of this western bearing I found myself at

the Yankton agency, twelve miles below the Fort, in the limits of the famous buffalo grass. This year the Yankton Indians have had successful buffalo drives, not to exceed ten or fifteen miles from the agency. On the great route from Leavenworth to Santa Fe, if I remember rightly, buffalo grass is found on the Cow creeks, before reaching the big bend of the Arkansas river. A glance at the map will show Big-bend and Fort Randall to be in about the same meridian; showing the buffalo grass to have a pretty well defined eastern limit, running in or near the same meridian.

I do not know if I have told you any news. I have certainly endeavored to give you impartial opinions of this great region so near to sunset, of which, probably, no one has written you before. But what I have certainly convinced you of is that I have not forgotten the COUNTRY GENTLEMAN, nor my wish that I was a substantial Country Gentleman myself. I have seen but few numbers of the Co. GENT. in the last year; most of the time I have been too busy to read it, but I hope the time is not distant when the old quiet and order will be re-instated, and I shall see the cheerful countenance of the Co. GENT. every week. E.

[For the Country Gentleman and Cultivator.]

IRRIGATION.

I have just returned from one of my meadows, and am so strongly reminded of our old friend Major DICKINSON, that I cannot resist the desire of devoting a little time to the Major and some of his special hobbies—for he would not be himself if he had not at least half a dozen in hand at a time. By the way, our South or Central American cousins will never know him and appreciate his many valuable qualities, unless they pitch into some of his favorite theories, or perhaps his facts, for he never believes in theories. They will never see the Major in all his glory till they dispute some of his *farming facts*. If they wake him up on that subject, they will get some idea what thunder means. How often at the annual meetings of our Agricultural Society, when discussions were getting tame and uninteresting, have I doubted some of the facts of the "*gentleman from Steuben.*" How quick everything changed when that gentleman got the floor. Wo to the unlucky man who had thus stirred up the sleeping lion. I think if the Major answers this, he will give me credit for having on pretty much all occasions, been on the opposite side; that he rarely made an important assertion that I did not dispute it; and in the discussion that followed, it was very rare that I did not get important facts. Indeed, I know of no man who had gathered up a greater amount of experimental knowledge upon all subjects connected with agriculture, than our old friend. It is true that now and then a little chaff might blow out with his wheat. But then it has been truly said, or might be, that there is no real great man who does not mix some folly with his wisdom. But the Major's chaff took nothing from the value of his wheat.

The last hobby which the Major seemed to be riding, was irrigation. To hear him talk you would have concluded that his idea of perfect happiness and paradise, was a great mud-puddle, always full, on the top of some celestial hill, covered with blue grass, white clover, red-top and timothy, and he, hoe in hand, opening the little sluices, agitating the puddle, and leading the muddy waters along the face of the hill upon his favorite grasses.

He insisted that there was hardly a farm upon which a few acres might not be profitably irrigated. I insisted that there were few farms, unless in mountainous or hilly regions, where irrigation amounted to any thing. Of course this brought him out, and we had quite a discussion, resulting in my promising to go home and see if I could not find at least an acre that could be more or less benefitted by riding his hobby over it.

There is a little sink into which the surface water from perhaps ten acres is drained. When the field is plowed water is usually carried from this sink down the slope of a slight hill, on one side of it, in a ditch; but when in meadow, it is left to flow off without much let or hindrance. The field has been in meadow for some years, and portions have *run out* by reason of the worms and frost; and I have at times prepared to plow it, but other work being more urgent, and other portions yielding a fair crop of grass, it has been left, and for the last two years the experiment tried of making it a permanent meadow. A year ago last spring, I bethought me of my friend the Major, and spending about an hour one day with a man and a spade, I turned the water flowing out of the sink round the face of the hill, as high up as I could make it flow, and let it out upon the grass. Last year a decided improvement was manifest wherever the water had flown out upon the grass. Last fall I manured both above and below the little sluice that carried the water, and to-day I have mown the grass upon the ground on each side. I think that upon which the water was conducted will give at least two and a half tons to the acre,—the man that mowed it says three tons,—while the other will not yield half a ton; and both were in precisely the same condition before the experiment was begun, and, except the water, have been treated in the same manner. The experiment cost me perhaps in all 50 cents, and a little personal supervision which all together would not be equal to two hours. I get for it over five tons of hay extra this year, and with a little more trouble I shall cover nearly double the surface, and make an increasing profit. So much for one of our old friend's hobbies.

Darien, N. Y. T. C. P.

[For the Cultivator and Country Gentleman.]

TENACITY OF LIFE IN THE DUCK.

In the month of January 1859, while residing on Springside, we had occasion to weigh some of our Rouen Ducks. This was on Saturday. On the Monday following, one of the number which had been weighed was missing; nothing could be seen or heard of it. As no feathers or other evidence could be found, we concluded she had either strayed away or had been carried off by some *fowl* thief. About three weeks after the weighing took place, and while our men were engaged in getting ice for the summer's supply, their attention was attracted by a strange noise issuing from the waste-weir—a trunk twelve inches square and six feet in length, ending in a stone drain about eighteen inches square. The water in the pond where the ducks were in the habit of visiting in the summer, is from six to seven feet deep, chiefly supplied by springs from the bottom. The waste water flows over the top of the trunk. On approaching and examining more closely, nothing could be seen of the duck, but occasionally the voice and faint quackings could be heard apparently some distance down the drain. There was no way of extricating the unfortunate prisoner from her subterranean abode except by opening the drain. The water of the pond is confined by an embankment sufficiently wide for a road, under which the drain passes. About thirty feet from the border of the pond, we caused an opening to be made in the drain, but as night was drawing near, when finished, we concluded to throw some corn in and about the opening, and leave the exit of the duck until the morrow, when day-light would induce her to come forth; but Madame Duck had been too long imprisoned and on short rations, to remain in her dark and dismal cell another night. Accordingly, as soon as she discovered daylight, she emerged and waddled her way to the poultry-yard, apparently much pleased to join her old associates.

The most singular part of this is, that from the time the duck was last seen in the yard, to the period she was first discovered in the drain, included eighteen days, without food, and apparently not in the least affected by her protracted fast. The question naturally arises, what did she find to sustain life? We know, to be sure, that ducks are fond of worms, grubs, and aquatic insects, &c.; but this dark abode in this cold season, would hardly admit of her finding a supply sufficient to sustain life. C. N. BEMENT.

Bennington Centre, Vt.

LETTER FROM MR. CORNELL.

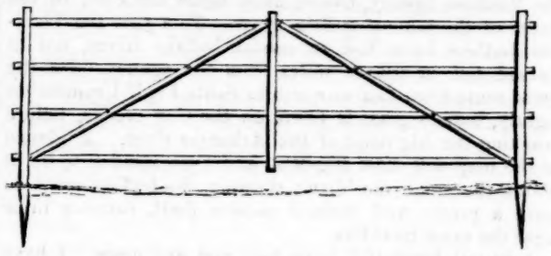
AGRICULTURAL IMPRESSIONS IN ENGLAND—THE DIFFERENT CROPS—HURDLE FENCES—SYSTEM OF SHEEP FEEDING, &c., &c.

LONDON, August 25, 1862.

FRIEND TUCKER—In response to your wish communicated through our mutual friend Col. J., I turn out this morning at 5 A. M. to write you a short letter, but I fear I shall fail to make it interesting to either yourself or the readers of the COUNTRY GENTLEMAN, as my mind is constantly diverted from the subjects I must write about, by the gloomy aspect that English type gives to American news.

A visit to Rothamsted in July, furnished instructive and interesting matter for a letter, and I intended ere this to have put it in that form, but the moments passed occupied by other objects, and now the memorandums are packed for their homeward voyage, where they must rest for the present.

I see much here that interests me, and it appears to me that we may learn much that will be useful to us as American, farmers. England, in some respects, is better tilled than America; in others not so well. Plowing, the foundation of good agriculture, is done better in New York than here, and the American plow is a better implement, and better adapted to its uses than the English plow. The harrowing, cultivating, pulverizing, crushing, rolling and drilling is done better here than with us, but at an expense of horse flesh and labor that our farmers would regard as ruinous. Harvesting here is an antiquated process, descended from the Romans, the Normans or some other ancient race of people, entirely out of place in the 19th century. With labor at half the price we pay at home, I am confident that it cost three times as much to put a field of wheat in the shock as it does in New York. Securing the hay crop is equally tedious. I have seen hay fields here in which the new grass had grown six inches after the field was mowed, before the hay reached the stack. More pains is taken here than with us to have the wheat pure and varieties unmixed. In hundreds of fields that I have noticed with care, I have failed to find a head of wheat other than the variety sown. This is done by carefully picking over the sheaves that are thrashed for seed, and removing other varieties, if any are found. I have not seen a single spear of rye growing in a field of wheat since I have been here, and rye is grown here in nearly the same proportion I judge that it is in New York. Barley is also cultivated with like care, and the different varieties are kept separate, the two-rowed mostly cultivated. Oats is less cared for, and the varieties are mixed quite as much as with us. The vetch or tare is cultivated much for early green food, and is eaten freely by the horses, cattle and sheep; it is also grown to be fed off by hurdled sheep, with a view of fertilizing the soil, a practice I think that we can adopt with profit. Rape is also grown for a like purpose, and is said to fatten sheep very fast, and the sheep certainly fatten the land very fast. Our climate is not adapted to feeding off a turnip crop in the fall and winter, as it is done here, but I see nothing to hinder the feeding off a crop of vetch or rape in July and August as a foundation for a wheat crop. To carry this in practice we want a convenient and cheap hurdle fence. Here such fence is made generally of split hoop-poles for bars, with the ends framed into saplin posts, and a like post nailed across the center of the bars, with two braces, of split hoop pole nailed on to the bars, the end posts long enough to drive in the ground to support the fence, as shown in the engraving.



This makes a light fence, easily moved, and if properly housed when not in use, will last for years for hurdling sheep.

The practice in feeding is this: Supposing we have a flock of 100 sheep, half of them dry ewes and wethers, that we wish to turn off fat to the butcher, the others to be wintered, and the vetches are large enough to be fed off. We get out the hurdle-fence and fence off say the eighth of an acre, and place the 50 sheep therein that are to be fattened, where they remain a few days, until they have fed off all they seem inclined to take freely, when a new lot is fenced off for them, and the store-sheep take their place; and thus the one follows the other through the field, leaving a naked fallow behind the store-sheep, finely fertilized and in the best condition to be turned over to receive a crop of wheat. In feeding the rape, I am told that it springs up after being fed off, and furnishes successive crops of feed, so that it may be fed off two or three times during the season and then furnish a crop of seed the next season; but with us I presume the frost of winter would kill the roots, so that we should not get the crop of seed. The top of the rape resembles the top of the Swede turnip—the root that of a radish; it will succeed, I think, on any good corn land, and the seed should be drilled in as turnips are, say in rows two feet apart. We may have plants at home that will do equally well to hurdle sheep upon. I refer to this subject for the purpose of directing the attention of our farmers to this mode of fertilizing our farms, while we are supplying our markets with the best of meat.

The turnip and mangold are very extensively cultivated here, and without them England could not feed half her stock, or furnish her people with beef and mutton. Their moist and cold climate is better suited to the root crop than ours, and justifies its more extensive culture; but I think we could profitably increase the culture of the Swede and mangold, and depend on them to a greater extent than we do for feeding our stock. The cooling nature of the mangold is well suited to counteract the heating tendencies of our Indian corn, and the two would go well together in fattening bullocks.

The live fences of England I think less of than I did before I saw them. The hedge generally occupies as much or more land as our crooked rail fence, and is quite as expensive. A stone wall is the best and cheapest farm fence, when the material is at hand to build it. England and America both have more fence than is profitable or desirable in my opinion—the Continent perhaps has less. In travelling from Calais to Paris, thence to and through Switzerland, Germany, Prussia, and Belgium, we saw no fencing of farms, no hedge rows or waste land between crops. Cattle are easier fenced in than out, and the easiest method is pursued.

In England it is being discovered that they have more hedge rows than they can afford, and one estate that I have heard of, has recently reclaimed and added 45 acres to its tillable lands, by uprooting old hedges and consolidating fields. It is high time for a fence reformation at home, but we should not be so radical as to destroy all our fences at once. E. C.

THE SEASON IN THE ISLAND OF JERSEY.—A letter from our occasional correspondent, Mr. LEVESQUE, in the Island of Jersey, (England,) informs us that the weather there has been very cold and wet. In July it was more like March than summer; some of the land has had to be sown over three or four times. We should be very greatly obliged if Mr. LEVESQUE will give us the system pursued upon the farms of Jersey, the climate, the soil and production. It has been stated that they get three crops a year from their lands, and we know of no man in Jersey better able to inform us, if true, *how* it is accomplished.

[For the Country Gentleman and Cultivator.]

BEST WAY TO DRY APPLES.

MESSRS. EDITORS—According to the reports from all parts of the country, there has seldom or never been a larger crop of fruits, of all descriptions, than that of the present season, and especially is this the fact in regard to the apple crop; and the question is now being asked, what shall be done with our apples? If the apple crop was a uniform one from year to year, this would not be a question of any great importance, but as is generally the case, a year of abundant crops of apples is generally followed by one or more years in which the crop is a short one, in many sections of country, and sometimes one of great scarcity, as was that of last year, it is very desirable that in years of plenty provision should be made for those of scarcity. By careful picking and storing our winter apples may be preserved to some extent, but for summer and fall apples the only general method is that of drying them; and if they are well dried, and carefully preserved, they can be kept so as to supply the deficiency of short crops when they occur, and prevent the necessity of doing without them at such times, or of paying the high prices at which they are sold.

The most general method adopted in drying apples is, after they are pared, to cut them in slices, and spread them on cloths, tables or boards, and dry them out-doors. In clear and dry weather this is, perhaps, the most expeditious and best way; but in cloudy and stormy weather this way is attended with much inconvenience, and sometimes loss, in consequence of the apples rotting before they dry. To some extent they may be dried in this way in the house, though this is attended with much inconvenience.

The best method that I have ever used to dry apples is to use frames. These combine the most advantages with the least inconvenience of any way, and can be used with equal advantage either in drying in the house or out in the sun. In pleasant weather the frames can be set out-doors against the side of a building, or any other support, and nights, or cloudy and stormy days, they can be brought into the house and set against the side of the room near the stove or fire-place.

My frames are made in the following manner: Two strips of board, 7 feet long, 2 or 2¼ inches wide—two strips 3 feet long, 1¼ inches wide, the whole three-quarters of an inch thick—nail the short strips across the ends of the long ones, and it makes a frame 7 by 3 feet, which is a convenient size for all purposes. On one side of the long strips nails are driven 3 inches apart, extending from the top to the bottom.

After the apples are pared, they are quartered and cored, and with a needle and twine, or stout thread, strung into lengths long enough to reach twice across the frame; the ends of the twine are then tied together, and the string hung on the nails across the frame. The apples will soon dry so that the strings can be doubled on the nails, and fresh ones put on or the whole of them removed, and others put in their place.

As fast as the apples become sufficiently dry they can be taken from the strings, and the same strings used to dry more on. If large apples are used to dry, they can be cut in smaller pieces.

I suppose that pears and quinces, and perhaps other fruits that can be strung, might be dried in this way, although I have never dried any in this way except apples.

Wilmington, Vt., Sept. 1862. C. T. ALVORD.

Drying Peaches without Peeling.

A correspondent who has tried the plan of drying peaches mentioned below, to his great satisfaction, requests us to republish it for the benefit of our readers:

The *furze* is removed by immersing in lye, made by boiling wood ashes in water, to a tolerable strength. The lye should be warm, but not so as to cook the peaches, which are rubbed in it awhile, and then washed in clear cold water. Every particle of furze will be removed, and only a thin skin remain—they can then be cut and dried in the usual manner. They thus lose nothing of their sweetness by peeling, and are said to be of the best quality for all cooking purposes.

[For the Country Gentleman and Cultivator.]

EXPERIMENTING IN BEES.

Desiring to try a few experiments in the construction of hives and management of bees, in June, 1860, I engaged two or three swarms of a friend, and prepared hives differing from any I had ever seen. I furnished pretty rough specimens of boxes, as I prepared them myself, with little knowledge of the use of tools. I have since materially improved them, retaining however, in the improved ones, the important principles of double room by the use of both top and side boxes.

I have, with a number of swarms which came out from the 3d to the 25th of July 1860, '61 and '62, five swarms hived in June. I will now give the results of the five June swarms:

No. 1—Hived June 18th, 1860, has given in three subsequent seasons, 1860, '61 and '62, 102 lbs. of box honey—average 34 lbs.

No. 2—Hived June 20th, 1860, has given in the three seasons 150 lbs—average per year 50 lbs.

No. 3—Hived June 22d 1861, gave in that season 53½ lbs. In 1862 sent out a swarm July 10th.

No. 4—Hived June 26th 1861, has given 90 lbs. of honey—average 45 lbs.

No. 5—Hived June 28th 1861, has given in 1861, 31½ lbs of honey, in 1862 17 lbs., and a swarm July 3d. Amount of honey 444 lbs.

Average for the five swarms each season, 37 lbs.

The honey has all been deposited in glass boxes five inches in depth, and entirely free from brood comb, except the first two which were six inches deep, and had some small portion of brood comb.

The boxes were so arranged when the swarms were hived, that the bees could go directly into them, when they were hived, and commenced work in both boxes and hive at the same time; consequently more than 75 per cent of the honey has been gathered early in the season from white clover, and has commanded the highest price.

I have used both top and side boxes, the whole nearly equal in capacity to 2000 cubic inches. By thus doubling the room for the bees, swarming is rendered improbable. I have but two swarms from the hive in the three seasons. I I think those two would not have swarmed had the boxes been supplied at the commencement of the working season. By closing the boxes, the hive is reduced to common size, and swarms will issue as in other hives.

Here are a few of the facts resulting from the experiments named. More may be given at a subsequent time.

Albany, Sept. 1862. JASPER HAZEN.

Elder HAZEN invites friends to call at his Apiary, at 168 Third Street, Albany, and examine and judge for themselves.

Observations on the Growth of Trees.

I have in my fruit garden the following fruit and ornamental trees, which I measured in 1860, '61, and '62, (each spring,) before they commenced growing, of which the following figures are a correct abstract:

Names of Varieties.	Hight of measurement.	1860.	1861.	1862.
Rome Beauty apple....	2 feet high.	5¼ inches.	8 inches.	10¾ inches
Pound Pippin do. ...	3 do.	8¾ do.	10¾ do.	13 do.
Capron's Pleasant do.,	3 do.	10¼ do.	13½ do.	15½ do.
Crawford's Keeper do .	1 do.	3¾ do.	5¾ do.	7½ do.
Madeline pear, (dwarf,)	1 do.	7 do.	8½ do.	9¾ do.
Magnum Bonum plum,	1 do.	7¾ do.	10 do.	11½ do.
American Balsam Fir,.	1 do.	6¾ do.	8 do.	10 do.

These are facts that will show to the horticulturist the rapidity of the growth of trees under good cultivation. The pear mentioned above now has on about 400 pears; its age is about eight years from the bud.

Southern Ohio, June, 1862. A. L. WOOD.

[For the Country Gentleman and Cultivator.]

A Suggestion on the Culture of Peaches in Unfavorable Climates.

Eds. Co. Gent.—1. It is well known that the summer climate of Central New-York, and so correspondingly of other States east, and especially west of it, is both warm and long enough for the maturity of the peach.

2. The great evils in its cultivation are:

1st. The pressure of the winter's cold—which, not so much by its intensity, as by its sudden changes, kills the fruit, though not the leaf bud.

2d. The influence of prematurely warm weather, sometimes late in March, but more commonly in April and May, giving an excitement to the circulation which is subsequently checked by cold and often freezing weather, and often by cold dry winds, in consequence of which many buds die, and others are so chemically changed that the early developing bud exhibits the evil known as the curled leaf.

3. Now, as no adequate protection from these harmful influences can be cheaply applied to the tree when standing in the garden or orchard, the covering of the roots with straw after the ground has deeply frozen, being quite inadequate so long as the sun's warm air of spring has free access to the top of the tree, I propose the following plan as more likely to secure a crop of fruit:

1st. Construct stout tubs like half hogsheads, say three and a half feet in diameter and three feet deep; or, in place of them, make square boxes of equal capacity. They might be mounted on small iron wheels, or more cheaply, be furnished with strong iron ears at the top, through which strong poles could be run when about to be removed; or a low strong truck could be used.

2d. Fill such vessels with carefully prepared earth, suitable for the growth of the peach.

3d. In these tubs or boxes plant peach trees in the fall, selecting such varieties as are known to make a dwarfish growth, or dwarfing them on the plum stock. Begin with trees that are about two years old, and that have had their roots shortened at the close of the first year.

4th. Provide a winter shelter, to which these trees thus prepared, may be removed. Advantage may be taken as an experiment, of some out-house already built, or prepare one for the purpose. It may be cheaply built, but should be tight, so as to exclude not only the sun, but the too free access of the warm air of spring. It might be well to whitewash or paint it white externally. Let such a building be from eight to ten feet between the earth and the floor or roof above. It should be provided with a door-way at least ten feet wide. Allowing say seven feet square, for the space of a dwarf tree, after it has been shortened in, then a room fourteen feet square would accommodate four trees, and so proportionately may be calculated the capacity of a larger room.

5th. Into this shelter let the trees be removed about the first of December, and there let them remain until the first of May, or even a little longer, if the buds make much progress under cover. These directions are given for this locality, (Utica,) where the peach usually flowers about the 12th of May. On the subject of winter treatment, experience must guide. Perhaps in a warm open winter it might be needfull to water the trees. A band of hay or straw might be drawn around the outer limbs of the tree, thus diminishing the space needed for its winter shelter.

4. I do not suggest this plan as a cheap one for the production of peaches. Yet I am sure that men of wealth and leisure, who appreciate the difference between a ripe peach plucked freshly from the tree, and one picked immature and carried one hundred miles to market, would readily adopt this plan if they were sure of gathering from a tree so treated, annually one-half bushel of ripe fruit.

5. This plan I have not tested, nor am I in a condition to do so. Yet I am much encouraged in suggesting it by what I witnessed at the German Socialist Colony at Zoar, Tuscarawas Co., Ohio, twenty years ago. There I saw lemon trees fourteen feet high, probably, and orange trees somewhat less, cultivated in this manner. When I saw them standing in large tubs in the open garden, late in August, they were covered with flowers and fruit in every stage of maturity.

The house for their winter quarters was of brick, with large double doors like a barn. In this case, unlike the peaches, they needed artificial heat during the whole winter. I see no reason why this plan, with the modification I have suggested, may not be applied to the peach successfully. C. E. Goodrich.

Utica, August 21, 1862.

[For the Country Gentleman and Cultivator.]

ANCIENT GARDENING FANCIES.

The stamping of fruit as practiced in Vienna, noticed in Country Gentleman of Aug. 21, p. 131, is no new thing under the sun, but was more ingeniously done by Hellenic gardeners, as we are assured by Theophrastus, in this wise:

The stone of the fruit (peaches, almonds, &c.,) was steeped in water for several days, then carefully divided, the kernel taken out, and with a brazen pen—(a steel one would no doubt do as well—a gold better!) Whatever words or letters were desired, were inscribed upon it. The stone was then closed over the kernel, bound round with papyrus and planted, and the peaches or almonds which afterwards grew on that tree, bore every one of them the legend inscribed upon the kernel!

I tell the tale as it was told to me by a sober classical author, and corroborated by his fellows.

Another fancy was to make citrons, lemons, &c., by the application of a clay mould into which they grew, assume the form of a human face, birds, and other animals.

They were also introduced, when small, into the neck of a bottle provided with breathing holes, the figure of which they assumed as they perfected their growth into all its dimensions.

A great delight of the Greek gardeners was to have monstrous and extraordinary vegetables. They watched the cucumber (always a favorite in the east,) on its first appearance above ground, and then covering it over with fresh earth, repeated the same operation on its reappearance three successive times, by which it is said *the fruit became seedless.* "They were made to grow to a great length by having vessels of water placed daily within a few inches of their points, which exciting by attraction a sort of nisus in the fruit, drew them forward as far as the gardener thought necessary."

Pliny mentions in his Natural History another method, which was to take a large reed, split it, and clean out the pith; then introduce a young cucumber into the hollow, bind the reed, and the fruit perfects itself through the tube to an enormous length.

Lord Bacon, in his Sylva Sylvarum, 462, refers to the experiment of "setting a pot of water a short distance from the cucumber to make it shoot out," and sagely remarks, that if it be true it is an experiment of a high nature, for it discovereth perception in plants to move towards that which should help and comfort them, though it be at a distance! The ancient tradition of the vine, he goes on to say, is far more strange; it is, that if you set a stake or prop at some distance from it, it will grow that way, which is far stranger than the other; for that water may work by a sympathy of attraction, but this of the stake seemeth to be a reasonable discourse! R. G.

Lenox, Mass.

Growing Rhubarb from Seed.—While in Canada lately, I procured a root of excellent rhubarb, and I have saved some seed from it, but am told by a neighbor that it will not produce the same kind of plant. Will you please inform me if this statement is true? M. B. *North Littleton, N. H.*

[The seed will produce rhubarb, of course—possibly, if grown by itself, of the same quality, but more likely of an inferior quality.]

LETTER FROM COL. JOHNSON.

Steam Plows---Mowers---Ag. Show of the Yorkshire Ag. Society.

YORK, ENGLAND, August 6, 1862.

L. TUCKER & SON—I arrived at York on Monday, the 4th instant, and made acquaintance with some of the officers of the Society at the Show grounds, and was advised of the trial of steam plows and mowers at Stockton, some four miles distant. I went up with Mr. OSBORN, who had his combined machine and mower to be entered on Tuesday.

The steam plowing was first in order—only two of the machines being on the ground, Fowler's and Howard's—the manner of their operation having been given, I believe, in the COUNTRY GENTLEMAN. Fowler operates four plows and Howard three. So far as the plowing is concern ed, it was well done by each, but which possesses the advantage of simplicity and expense, will be decided in the report of J. C. MORTON, Esq., who has the matter in charge, and who is in every way competent for the business. Mr. Fowler's plows were operated by an eight-horse power engine—the engine and windlass being stationed on the headland, and opposite to them a self-acting anchor, between which the plow is pulled by means of a wire rope, backwards and forwards, one end being alternately in the air and the other in the soil, thus avoiding the necessity of turning the headlands, which is a very good arrangement. The Messrs. Howard's machine was worked with an ordinary portable engine, with detached windlass, worked by a connecting rod, which seemed to be a good arrangement. It is a three furrow plow, and from its simplicity its motions are very easily controlled by the man having it in charge. The machines, after the preliminary trials, were started for an hour's trial of speed. On the expiration of the time it was found that Fowler's plow had plowed exactly an acre in the hour. Howard's, in the same space of time, with a ten horse engine, had plowed fourteen chains twenty-three links, and 53 links in width. The work was well done, but each of the plows had their advocates. Mr. Morton's report will give the results.

At the close of the plowing there was a trial between Mr. Fowler's machine as a digger or scarifier, and a seven tine cultivator invented by him. They were worked with a 14 horse-power engine of Messrs. Kitson & Hewitson of Leeds, and which is constructed so that it may be adapted to the purpose of thrashing, and to most farming operarations. The engine was a powerful one; its arrangement of the wire ropes was preferable, in our opinion, to either of the others.

As to the practicability of introducing these machines into our country, I have great doubts. From the best estimates that I can make, the expense of plowing will be of more than by our ordinary methods. The constant wear the machinery and wire ropes must be very expensive; the difficulty when the engines or ropes give way, as they undoubtedly will, must render it very doubtful, to say the least, as to their being introduced into practical use. The quantity of fuel and water to keep the engines in operaration, is very large, and of course very expensive. It must, however be had, and will add largely to the difficulties in the way of its introduction in our country at present. I had hoped to have seen a traction engine with plows or other arrangements to do the work, but there was none present; and from information obtained from a leading implement maker, it appears not to have given satisfactory evidence of its being successful. It is certainly very desirable to secure the application of steam successfully to aid in the cultivation of the farm, and in the onward march of improvement in machinery, I trust we shall yet be favored with the right machinery to accomplish the work—the machine so simple in its arrangements as to be managed by ordinary laborers, thus avoiding the expense of engineers, who now have to be employed. Should Mr. Morton's report be published soon, I will forward it to you.

After the plowing was disposed of, the trial of mowers was had. Reapers could not be tried, as the grain was not ripe, and would not be under two weeks.

There were from 10 to 12 mowers, I think, on the field, but all of them were not tried; they were all, I believe, of American origin, and several were made in America—Wood's, Osborne & Kirby's, Tremain's, the Buckeye, I believe were all made there. The others were made here, some with modifications of the original machine, some with improvements valuable, and others quite doubtful. There were no arrangements to test the draft of the machines, or the amount of land which could be cut in a given time in the ordinary work in the field. The grass was light, though quite thick at the bottom, and required the knives to be properly arranged so as to prevent clogging—a neglect to do this in some cases very much marred the work of some of the new machines, especially one or two from our country. The machines were put in operation, each one managing as he thought best, the judges following the machine around the land two or three times, ascertaining how it did its work, and this, so far as I could judge, was all the means used to ascertain the qualities of the machine for actual farm work. This was surely not such a test as would settle any question as to the value of a machine. It was apparent in the trial, that where a good pair of trained horses, used to the work, with a driver equally well trained, the work was altogether better performed than where a strange span of horses and driver were used. Several of the machines performed their work, I thought, very well indeed, and some of them with very light draft, and others the draft was apparently quite heavy. Wood's small mower, and Burgess & Key's mower, (the Allen mower, I believe, improved by them,) performed the work, I think, most satisfactorily, though some of the others did very well. The judges had not made their report when I left the show grounds this afternoon, and I cannot give the award, but presume that the prize, only one being offered, will be given to Wood's small mower,* to which it was awarded by the Royal Society at Leeds last year. It is a very good machine, and works well in grass adapted to its use.

The show which opened this morning is an excellent one. The cattle (Short-Horns) were, as a whole, first-rate, and far better as a whole than at Battersea—that is, there were fewer inferior animals, and unworthy a place in a show ground, than at the Royal Show. In fact, there was scarcely an animal but what would be esteemed *good*, exhibited, and in some of the classes, especially the cows and heifers, they were extraordinary. Mr. Booth's cow, "Queen of the Vale," the prize cow at Battersea, won the 1st prize here, against five competitors, which were not easy to beat. The 2d prize to Mr. Eastwood of Swinshaw House, Burnley, bred by Mr. Wetherell. The other exhibitors were Lord Feversham, Mr. Douglass, Col. Townley and Lady Pigot. They were all excessively fleshy, altogether too much so for breeders. But fat reigns here in cattle, sheep and swine, to a degree far above anything I have before seen. Yorkshire pigs were in the ascendant, and they are really worthy of their fame. The Leicester sheep appeared first-rate. The horses were as a whole very good—in the hunter and roadster classes far ahead of Battersea. I have not time to write further as to the show, but will endeavor to give you a report as to the residue of the show. A horticultural exhibition adjoining the show grounds was opened to-day, showing that Yorkshire is equally celebrated among the roses as among the Short-Horns.

B. P. J.

SPRING WHEAT IN IOWA.—A correspondent of the Iowa Homestead says the wheat in Muscatine county is not half a crop. The Club wheat which was formerly so successfully raised there, is this year almost a total failure. The Tea or China variety does much better.

FARM GATES.

A perfect farm should not only be laid out in fields adapted to a regular system of rotation, with a lane or good hard, smooth farm road to render each part easily accessible; but every field should be numbered and be entered through a self-shutting and self-fastening gate. One of the best things, therefore, that a farmer may do early in autumn, is to procure a suitable supply of timber, that he may employ a portion of his spare time on the arrival of winter, in constructing good farm gates.

For a light, cheap, good gate, one of the best we have lately met with is figured in the annexed cut, and we give

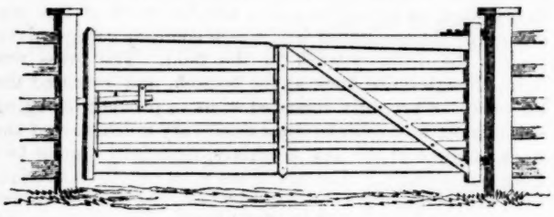


Fig. 1.

the dimensions of every part, that the stuff may be procured of the right size and length, and save the loss of cutting away waste portions. It is ten feet and a half long, and the dimensions of the different parts are as follow:

Top piece, 10½ feet long, 3 by 4 inches at heel, and 2½ by 2 at latch end, is best made of elm or white oak, but will do of pine.

Six horizontal bars below, all an inch thick—the top one 2½ inches wide—the next four 3 inches wide, and the bottom one 4 inches wide—all of pine.

Heel piece, 4 feet 8 inches long, 4½ by 3 inches; head piece (or at latch end) 4½ feet long, and 2 by 2¼ inches—both of oak or other hard, tough wood.

Two perpendicular braces, (one on each side of the horizontal bars, opposite each other, secured by screw-bolts passing through the three,) 3 feet 8 inches long, 3 inches wide, and ⅞ inch thick, of white oak.

Two diagonal braces, 6 feet long, 3 inches wide, and one inch thick, of white oak.

The latch plays horizontally or endwise between two vertical cross-pieces, nailed on each side of two horizontal bars, and through a corresponding mortice in the head piece. The latch is 2 feet long, 2 inches wide, and ⅞ of an inch thick, of white oak. A vertical wooden spring screwed to the head piece, presses against a wooden pin in the latch, and keeps it shut. It is drawn back for opening the gate by means of another small pin in its upper edge.

The vertical and horizontal braces, being placed on both sides of the horizontal bars, and secured by screw-bolts passing through each, make a very strong gate, at the same time that it is very light. The whole cost, planed and painted, is about $3. In order to prevent the water of rains from penetrating the mortises, both mortise and tenon should be well coated with gas tar before the gate is put together. It would, perhaps, be better, as a cover against the admission of moisture, to extend the top piece over the whole, (as shown in fig. 2,) the end pieces entering the under side of this top piece, and not passing quite through.

Fig. 2 shows the construction of Dr. Robinson's gate, which is simpler and cheaper than the preceding. Its peculiar advantages are: 1. Extension of the top-piece so as to shield the mortises from rain; 2. Simple and

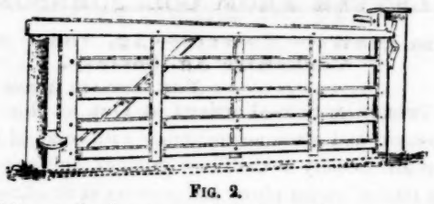


Fig. 2.

cheap hinges, the lower one being merely a concave piece of wood, moving around the post, as shown in fig. 3, and the upper a short iron rod driven into the top of the post (fig. 4) and resting on an iron plug in a hole in the top-piece; 3. A latch attached to the gate *post* instead of the gate, thus rendering simpler and stronger the moving part, and preventing sagging by the entire absence of any weight on the hinges, except when the gate is open. Fig. 5 shows the latch at *b*, and the top-piece of the gate, *a*, and fig. 6 a side view of the same. A pin or spike is driven into the post on which the hinges turn, to prevent hogs and other animals from lifting the gate, and which does not prevent its being placed on hinges while open.

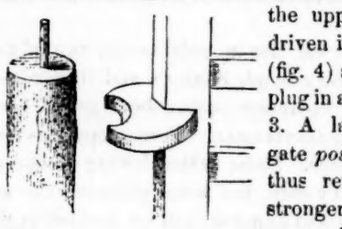


Fig. 4. Fig. 3.

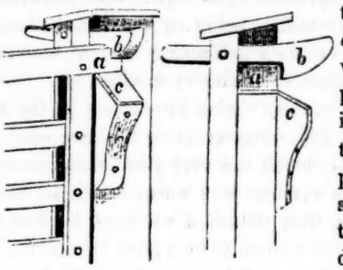


Fig. 5. Fig. 6.

The timber for this farm gate is as follows, and may now be got out for winter use: Top-piece, 11 feet long, 3 inches wide horizontally, 5 inches deep at the heel, and 2½ inches at the latch. Cross-bars, brace, and two pieces forming the head piece, 1 by 3 inches. The four horizontal bars or boards are 1 by 5 inches—five would perhaps be better, each 1 by 3 inches. The gate would probably be stronger if the vertical braces were placed opposite each other, and secured by screw-bolts, as in the last described gate.

A neat but more expensive gate is represented in fig.

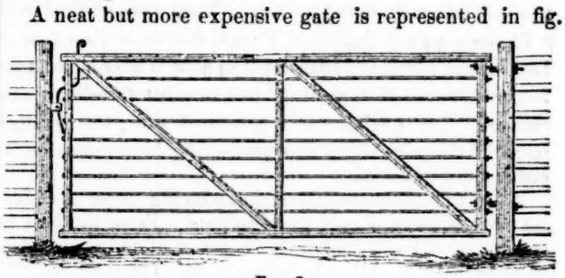


Fig. 7.

7. It is made of iron rods passing through a wooden frame. It is well adapted to all self-fastening latches, for being light, its momentum is but little, and it is not therefore easily jarred to pieces. It catches but little wind, and will not cause snow drifts.

If intended as an entrance gate to a dwelling, the dimensions may be as follow: Length 10 feet, height 4 feet; heel-piece (of white oak,) 3 by 3½ inches, and 3 feet 8 inches long; latch-piece same length, and 2 by 3 inches; braces and cross-bar, and top and bottom horizontal bars, all 1¼ by 3½ inches; rods round, ⅝ of an inch diameter, and secured by heads at one end, and nuts and and screws at the other. They are eight in number, and nearer together at the bottom.

MAKING BOARD FENCE.

Board fences, and those of post and rails, are gradually displacing, in large portions of the country, the old crooked or worm fences. As the old rails decay they are removed and used for fire wood, and the remaining ones shortened or closed together, giving place to the new board fences, a portion of which are built yearly by many farmers to supply the deficiency. A common well-made board fence, with durable posts, will last twenty to twenty-five years; but if whitewashed once in three to five years with fresh lime, and when the weather is dry and warm, the boards would probably continue at least thirty-five years. The posts will last more than twice as long in a gravelly soil with a good natural underdrainage, as in a heavy, wet soil with no drainage below. The amount of timber used in an old worm fence is about two and a half or three times as much as in a good strong board fence. That is, 1000 feet of boards and 50 posts will make at least 20 rods; while 300 rails and about 90 stakes are needed for the same length of worm fence. The relative quantity will, of course, vary with the size of the rails on the one hand, and of the posts and amount of boards used on the other—but the above is nearly the average.

Our present remarks do not embrace the building of stone walls, the best of all farm fences where they can be obtained, and hedges, a cheap necessity in other places. As much board fence is made in autumn, perhaps some of the following suggestions, which are not all new, may be useful to many.

Materials for Fences.—A durable *post* is a matter of great importance. The red cedar and locust are the most enduring. The former is becoming very scarce; the latter might become abundant by attending to planting. In fifteen or twenty years one tree will usually make five or six posts, and often more. The next best timber is swamp white oak, white cedar, (arbor vitæ,) common white oak, red or heart beech, chestnut, &c. But whatever be the timber used, it is of great importance that it be quickly seasoned after cutting, to prevent any tendency to become sap-rotten, and it should be dry when set in the ground. Theory, as well as experiment, shows that posts set green decay much the soonest, on account of the long time required for them to season when placed in the earth, inducing partial decay. In all cases where the soil is not well drained, the post must become alternately soaked and dried, as wet and dry periods successively occur, and this rapidly hastens decay. Such soils should therefore always have a good underdrain directly under the fence, which will serve a two-fold purpose—that of draining the adjacent land as any other drain would do, and also of carrying off the falling rain before it can enter and soak the foot of the post. Ramming fine gravel immediately about it would allow the water to pass quickly down into the channel. If tile is used in the ditch, a few inches of stone should be placed over it, and on this the post be set. The cost of cutting such a ditch is but little more than that of digging a row of post holes.

A post so treated cannot become water-soaked, and would have in some degree the same advantage for durability that is possessed by timber always kept dry or under shelter, which is known to last centuries. One other point of treatment will complete its durability, namely, giving it two good coats of gas-tar over the part that is to be half a foot above to half a foot below the surface. The tar should be applied hot, and the wood exposed to the hot sun a few days before the second coat is applied. Oak or white cedar posts would doubtless last at least half a century treated as here recommended by draining and tarring. We have known the durability of pine increased at least ten-fold by the tar coating.

Split posts are always both stronger and more durable than sawed ones. They are not cut across the grain, and the water does not enter them so readily. They may be split and placed to season at once, but if drawn to a mill to be sawed, must often lie some weeks. The only difficulty with the split posts is the labor of facing them, but this is quickly done with a sharp axe, by means of the simple contrivance figured and described on page 42 current volume of the Co. Gent.

The posts should be set at least two and a half feet deep, and the earth beaten with an iron-shod rammer very hard about them, by adding very small portions at once while the hole is filling. Charring posts is nearly useless, the charcoal being porous and admitting water, which hastens decay inside.

Boards.—Pine is best; then hemlock. They should be a full inch thick, and it will be a matter of economy to have every board the same width. It is an almost universal practice to have wide boards at bottom, and of different degrees of narrowness towards the top. There appears to be no advantage whatever in this arrangement, with a good deal of inconvenience in sawing and fitting the different widths, and sometimes of waste in material. Narrow boards are better than wide ones, provided the stuff is not knotty, and the posts are not too remote—four inches wide, and five boards high, (with the small ridge at bottom, yet to be described,) makes a neat fence. Four boards five to six inches will do—in either case the fence will be about four feet above the ridge. The nearer the posts are together, the stronger will be the fence—seven feet is the greatest distance that should ever be adopted—six is better. When other wood than pine or hemlock is employed, such for example as elm, oak or beech, the thickness of the boards should never exceed three-fourths of an inch; if thicker, the nails will not prevent them from warping or splitting as they season in the sun.

The distances asunder for placing the boards may be about as shown in the accompanying cut (fig. 1,) replacing

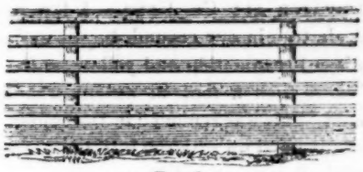


Fig. 1.

the lower or wide board by the embankment or ridge proposed. For nailing on the boards at proper distances, without the trouble of measuring and marking, provide a gauge as shown in fig. 2, and having nailed the top board

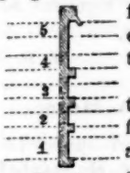


Fig. 2.

first, hang this upon it, when it will support each board in its exact position, as shown by the dotted lines.

A cap-board (fig. 3,) always strengthens the fence, and prevents the upper boards from becoming broken; and where unruly animals are feared, a top board nailed on each side of the post, surmounted by a cap, as shown in section by fig. 4, will render it nearly as strong as a solid timber top. In order to make the ends of the cap fit together perfectly, at the same time to adjust them most easily and quickly, make them lap an inch or two (fig. 5.) partly nail the upper one down, and then

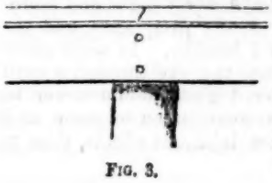


Fig. 3.

saw both off with one cut, a little sloping, as shown by the dotted lines, and they will make a perfect joint. The degree of slope, through one board, should be exactly the thickness of the cut.

FIG. 4.

It is usual to make the boards *break joints*—that is, for every alternate tier to meet at the ends on different posts. But there are several advantages in causing all the ends to meet on the same post, or keeping each pannel distinct. 1. The intermediate posts need not be so strong, nor have a face more than an inch wide—indeed, a narrow face is best, there being but little chance of its retaining water

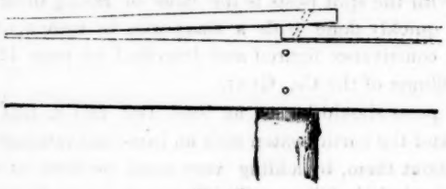


FIG. 5.

and causing decay. 2. Only one-half of the posts need have a wider face. 3. It is also easier to nail on the boards, and it may be more quickly done. 4. A vertical facing-board, which is required only when the fence becomes old and the ends begin to give way, is needed only for every alternate post. The cap-board should, however, break joints with these.

There are several advantages in plowing up a small ridge at the bottom to take the place of the bottom board. It lessens the amount of lumber, gives greater depth to the posts, makes an even surface paralled with the bottom board, and throws off the surface water from the posts into the shallow furrows made by the plow on each side. It should be plowed up and smoothed off as soon as the posts are set, and before the boards are nailed. To set the posts perfectly straight, the two extreme ones should be first set, and a line stretched tight between them at top and at bottom. Against these two lines all the intermediate posts are to be placed, and held there till the holes are filled with beaten earth.

[For the Country Gentleman and Cultivator.]

RENOVATING AN OLD TREE.

EDS. CULTIVATOR AND CO. GENT.—A few years ago a fine large shade tree in our grounds began to decay rapidly. The foliage became thin and yellow, and a cavity in the bole of more than a foot in extent was filled with vegetable mold. This was removed in December, 1859, and the hole carefully filled up with the intestines of a slaughtered animal while they were yet warm.

The experiment was repeated in December, 1860, and in December, 1861, and to-day the old tree, covered with a dense and beautiful foliage, stands at the side of its companion of fifty-five years, healthful and vigorous, as though it might live to the end of its century.

Duchess Co., N. Y. S. D.

To Cure a Film on the Eye of a Horse.

Take of white vitriol and rock alum one part—pulverize finely, and add clear spring water. With a finely pointed camel's hair pencil or soft feather, insert a single drop of this solution into the diseased eye every night and morning, and in a week the film usually disappears, and the eye becomes bright, sound and healthy. In some cases, pulverized loaf-sugar blown into the eye through a quill will prove a remedy. Powdered glass should never be used in such cases, although recommended by some, as it is much more likely to produce injurious effects, than to cure them.—*N. E. Farmer.*

GARDENS LATE IN SUMMER.

Farmers who raise kitchen vegetables, and who do not keep a regular gardener, are apt to neglect their grounds towards the end of summer and early in autumn, and allow weeds to ripen their seeds. Nothing reduces the current expenses of a family, for the outlay, more than a good kitchen garden; but the complaint with many is the labor of keeping it clean—the constant fight with weeds, weeds. Some have adopted the opinion that a quarter-acre garden will grow more weeds than ten acres of farm land, and there is ground for the belief, as some are managed. A few weeds, allowed to perfect seeds, will produce an abundant crop next year; and thus, year after year, the earth becomes filled with them, till the soil of a garden consists of three main ingredients, namely, a soil, naturally; a large amount of manure, artificially; and an immense supply of foul seeds, spontaneously.

Is it not practicable to clear out entirely and totally, the last of the three? Are weeds a necessity? If a garden contains a hundred thousand of them, and ninety-nine thousand are killed by the hoe, why not the remaining thousand? If nine hundred and ninety of this thousand, why not the remaining ten? ☞ *The soil of a garden may be completelg purified of weeds and their seeds*, greatly reducing the labor of keeping it in order, and largely contributing to a fine growth of the crops. It is easier to keep a garden perfectly clean, than to be engaged in a constant warfare with the weeds. The labor is far less. The reason that it is not done, is the want of care and attention. Nearly all farmers are satisfied if a garden is *nearly* clean. This is the origin of all the trouble,—namely, leaving a few weeds to seed the whole ground. The remedy is, begin now—eradicate every thing—and then, in three days go over again, and eradicate any thing that may have shown its head, and so continue the examination every week, weeds or no weeds. One morning every week should be set apart for this special purpose. Unless something of this kind is adopted, the thing will certainly be neglected. And after they are out, continue the process to *keep* them out. It is easier to spend a half hour in a morning once a week in this way, and have good crops, than to spend three days in each week fighting the intruders, and as a consequence getting bad crops.

A muskrat made a hole in a dam embankment, and the water was washing it larger. The owner applied to one skilled in such things, to close the dangerous orifice. He would charge a dollar, which was more than the owner would give. The next day it had increased, and then the offer was accepted. But the price had increased to two dollars, and was again declined. From this time the breach increased enormously, and the next day the owner had to give the fifty dollars required, or lose his whole dam. It is so in destroying weeds. A little labor at the start would save an immense increase. When a building is in flames, it will not do to suppress merely nine-tenths of the flames, but the last spark must be extinguished. Let every owner of a garden be sure that the last weed is killed, if there is such a one, as often as once a week.

POTATO TOPS, &C.—Every thing in the shape of rubbish, such as early potato tops, cucumber vines, refuse radishes, spring mulching, &c., should be buried on the spot, leaving a clean and neat surface. When an assistant digs a mess of potatoes, cause him to bury the tops at the time. They will decay and enrich the land.

[For the Cultivator and Country Gentleman.]

Cause and Remedy for Sore-Throat Disease in Lambs.

MESSRS. EDITORS—Seeing from time to time in the COUNTRY GENTLEMAN, many complaints of, and inquiries for the cause of throat disease in lambs—some attributing the cause to excess of grain given the ewe while carrying the lamb, some to the ram, some to the ewes and some to the peculiarity of the season.

Now I think I can set the matter at rest by giving my experience in this disease, in which it will be seen it is not in either of the foregoing causes, but in the manner of housing the ewes while carrying the lambs.

I first commenced with 25 of the best Leceister ewes I could find. I fed them liberally but not excessively with oats, at the rate of 16 quarts to the 25 ewes through the winter. I lost 33 per cent of the lambs with swelled throats, (a bunch in the throat about the size of a goose egg.) They snuffled at the nose, panted and labored hard to breathe, like a horse laboring with the heaves, and lived from one hour to three days.

My neighbors were of the opinion it was the oats fed to the ewes, and advised me to feed them on hay alone, as they did, with success.

The next winter I fed on hay alone, but my lambs were dropped with swelled throats as before, at about the same per cent. of disease.

I then concluded it to be in the ram, and next year made use of one which had proved himself an excellent getter, but I met with the same sore loss.

I then concluded the fault to be in the ewes, as they were bred some over a hundred miles distant, and so disposed of my whole flock, and purchased some ewes in my immediate vicinity, as well as a ram, all of which had proved their stock to be strong and healthy, but, when the lambs were dropped they too had swelled throats at about the same per centage.

I knew there must be a cause for this disease, and corresponded with many sheep breeders, but could find no one that could throw any light on the subject; all were strangers with the disease, till in a correspondence with Mr. J. C. TAYLOR of Holmdel, N. J., who is a noted sheep-breeder of (Webb) South-Downs, who called my attention to the manner of housing sheep; remarking, "that when the air of a sheep-stable was confined, though the ewes might appear healthy, yet there was enough poison in the air to cause disease in the lambs, which could not stand so much mismanagement as full grown sheep," and furthermore, "that there was a kind of poisonous air which found its natural home under buildings, cellars, and stables, and while no one has been able to tell why certain impure air causes certain diseases, yet it is a well known fact."

I then concluded the cause was in the sheep-stable; the basement of a barn set in a sidehill—three sides of stone wall, and the other double-boarded—with a door constantly open for going in and out of sheep, together with a window open for ventilation.

Now, I believe the ammonia from the manure, which seldom if ever froze, together with breathing over and over the same impure air, irritated and affected the throat and air-passage of the ewe, which irritation and affection was imparted from the ewe to the lamb, by a law of transmission, during the period of gestation, was the whole cause of the disease. Indeed I have proved it to be so, because last fall I built new and more airy apartments for my sheep, and wintered them in flocks of 25 each; and this spring I had the satisfaction of seeing my one hundred ewes with lambs that had *no swelled throats.*

Last week I examined the sheep-stable of a townsman who a year ago last spring lost several lambs with throat disease, and found the ewes run under the barn—which was under-pinned with stone, say five feet in front and two feet back side, making their home during winter damp and ill ventilated. Last fall the owner divided the yard with a fence, and kept the same ewes in an open shed, and says last spring he had no swelled-throat lambs.

Another gentleman in Barton, Vt., kept 60 breeding-ewes in a common cow-stable, say some seven feet in the clear; he raised only 10 lambs from the 60 ewes, the rest having died with throat disease. He thinks the fault to be in the ewes, and is about disposing of them, little believing the fault to be his own mismanagement.

Two parties in Newark, Vt., keep their ewes in open sheds joining the horse-barn, where the manure from the horse-stable is thrown into it, so that it being warm and inviting for them to lie on, with their nostrils close to the horse manure inhaling the ammonia fresh from the manure,—which is daily replenished for the five months they are permitted to lay on it,—causing an irritation of the throat in the ewe, which is imparted to the lamb. The owners sternly insist it is something peculiar to the season.

We know of a case where two cows were kept in a basement stable; both their calves, in the spring, were dropped with the same disease; one died, and the other lived by magnetising or occasional rubbing with the hand the throat of the calf.

My experience with breeding-ewes, together with suggestions, will be continued. GEORGE BACHELDER.

Stanstead, Canada East, Aug. 26, 1862.

Agricultural Produce of the United States.

The Census for 1860 gives the following comparative statement of the agricultural products of the United States:

Articles.	1849.	1859.	Increase.
Wheat, bushels,.....	100,485,944	171,183,381	70,697,435
Indian corn, bushels.....	592,071,104	830,451,707	238,380,603
Cotton, bales,.....	2,445,793	5,196,944	2,751,151
Butter, lbs.....	248,675,322	460,509,354	211,834,532
Cheese, lbs.,.....	105,585,893	105,875,135	339,242
Animals, slaughtered, ...	$111,703,142	$212,871,653	$101,168,511
Sheep, No.,.....	21,723,210	23,317,756	1,594,536
Wool, lbs.....	52,512,950	60,511,343	7,998,384
Sugar cane, lbs,.....	237,133,000	302,255,000	65,072,000
Molasses, gallons,.....	12,700,991	16,337,080	3,636,089
Sugar, (Maple,) lbs,.....	34,253,436	38,863,884	4,610,448
Tobacco, lbs,.....	190,752,655	429,390,771	229,638,116
Wine, gallons, ...	221,249	1,360,008	1,238,759
Hay, tons, ...	13,833,645	19,129,128	5,290,486
Orchard produce,.....	$7,723,186	$19,753,361	$12,030,175

On an average, the increase in the aggregate value of agricultural products, during the ten years, is more than double the ratio of increase in the population. The product of wheat, in 1859, exceeded that of 1849 by over seventy million bushels, which is an increase of seventy per cent. The growth of population for the decade has been about thirty-five per cent., or one-half the increase of the wheat crop. This shows that we are steadily increasing our surplus product of breadstuffs, and putting ourselves in a position for supplying the deficiencies of certain of the grain-growing countries of Europe. A similar increase has occurred in the product of butter, the yield of which has enlarged to the extent of 211,834,532 pounds.

[For the Country Gentleman and Cultivator.]

Sows Overrunning their Time---The Instinct of Pigs.

I have often noticed this matter of instinct in pigs, page 76 current volume, mentioned by Mr. GREGORY. The study of natural instinct in young animals is very interesting at all times.

I relation to sows overruning their time, would say that I have kept a strict account with a large number of sows in years past, but have never noticed them to vary more than from one to three days in dropping their pigs.

I know that many old moon farmers talk that if a sow varies more than 24 hours from her regular time, she would not do well, but I have lived long enough to see this idea perfectly skedadled. From the time that Mr. Gregory's sow overrun her time, being about the usual time that occurs between regular seasons in sows, I would ask him if his did not take at the next heat?

A. MOSS.

For the Country Gentleman and Cultivator.]

Hints on the Manufacture of Cider.

Whatever promotes the cause of domestic economy must be useful to those whose aim it is to nurse and make the most of a limited income. Therefore, "whatever is saved is earned"

There is not a more wholesome beverage, we will venture to say, nor one better adapted for general use than the juice of the apple, a fruit with which a kind Providence has bountifully supplied our country. But like every other artificial preparation, the qualities of cider depend on the selection and management of the materials from which it is made. It is conceded on all hands, that the operation is in general most carelessly and slovenly performed by the farmer, and that it is very difficult to procure this liquor of good quality. That there is a vast difference in the quality of the cider brought to market, is evident from the prices in ordinary seasons of abundance—it is from one to ten dollars the barrel. Now, the farmer who sells it at one to two dollars, makes himself poor; but he who obtains from three to ten dollars need never complain of superabundance of apples.

The expense of cider to the farmer is one consideration; the cost of fruit must be taken into account, because it must depend upon circumstances which will variously affect it. We presume that an orchard exists; and in that case, the cost will be little more than that of the labor bestowed in gathering it. The preparation of the fruit is readily submitted to calculation, provided there is a cider-mill at hand.

There are two points in making cider on which the quality very much depends—they are clearness of the juice and the fermentation. The former is easily obtained by the grater cider mills and careful straining; concerning the latter much is yet to be learned. The introduction of portable cider mills will tend both to improve the quality of cider and render the making of it less expensive. Apples when grated make much clearer cider than when mashed; consequently having less sediment, the liquor is more easily managed, and not so liable to be injured by foreign substances. It also sells more readily and commands a better price.

To make *good* cider it is necessary that the fruit should be ripe—that it should be sound—that it should be all of one kind, and that there should be a perfect grinding of the apples. If the apples are not ripe, the saccharine matter necessary to make good fermented liquor is not developed; rotten apples impart an unpleasant flavor to the lipuor, and different kinds of apples afford a liquor that will not ferment equally or perfectly. On the proper mixture of fruits, or rather of their proper separation, the merit of cider will always depend. The first prudential step consists in deferring the work till a late period of the year; November is quite early enough; and those apples are to be preferred which hang on the trees till ripe enough to fall without being much shaken, are capable of making fine cider. It is obvious that the most certain indication of the ripeness of apples is the fragrance of their smell and their spontaneously dropping from the trees. When they are in this state of maturity in a *dry* day, after the dew is off, the limbs may be slightly shaken and partially disburdened of their golden store; thus taking such apples only as are ripe and sound, and leaving the unripe longer on the trees, that they may also acquire a due degree of maturity. Care should however be taken that they are perfectly ripe, before they are taken from the tree, and kept until they are perfectly mellow; otherwise the cider will be of a rough, harsh taste, in spite of all the endeavors of the operator. It may not be amiss to make three gatherings of the crops, keeping each by itself. For this purpose, in the common practice of the country they are placed in heaps, and exposed to the sun, the air, and the rain, not even being covered, except in very severe frosts This is decidedly wrong. The strength and flavor of the future liquor are increased by keeping them under cover some time before they are ground; but unless a situation can be afforded, in which they are exposed to a current of air, and where they can be spread very thin, they are apt to contract an unpleasant smell which will much affect the cider produced from them. Before grinding they should be carefully examined, and all rotten and decaying apples should be selected and thrown to the pigs. The expense of this will be very small, and amply repaid by the excellence of the liquor and the ease with which too great a degree of fermentation may be prevented.

We now come to the most difficult part of the process in the manufacture of cider—fermentation.

The fermentation of the juice is a process of the utmost importance and nicety, and upon it depends the excellence or worthlesness of the cider. When the liquor is pressed and strained from the pomace, it should be put into clean sweet casks; no time should be lost, for if the atmospheric temperature be at or about 50°, fermention will commence almost immediately, and on the management of this mysterious process, the quality of the product depends. It should now be placed in a cool room or cool dry cellar, of even temperature, and be allowed to ferment, that all the feculent matter may escape from the bung, to insure which more perfectly, the cask may be turned on one side that the impurities may flow out more freely. Where making good cider is an object with the farmer, it is usually racked off after the fermentation has subsided, and time allowed for all sediment to settle.

It has long been our opinion that too much carbonic acid gas is suffered to escape during fermentation, producing either too much alcohol or acetous acid. We perceive some of the best cider makers recommend the prevention of the escape of too much carbonic acid gas, by laying light substances, such as cloths or leaves on the bung hole, while the cider is under fermentation. Now, if cider protected from the atmosphere, except by a small bung hole, is very liable to become too much acidified, would it not be advisable to exclude the atmosphere entirely during fermentation? To do this let the bung be driven in tight, and one end of a small bended tube closely fitted in a hole near the bung, and the other end of the bent tube inserted in a vessel of water. During the fermentation the carbonic acid gas will be driven through the tube, and rise in bubbles from the water, but no atmospheric air can enter. The fermentation can undoubtedly be stopped by racking off, and if necessary by short exposure in an open vessel to the atmosphere.

During the fermentation of cider, though it be called vinous, a good deal of acetic acid is, we believe, always generated, making those liquors more or less harsh, that is really acetic. To obviate this, put the juice into clean casks that have been fumigated with sulphur, and allow it to ferment from one to three weeks, according as the weather is cool or warm. When it has attained to lively fermentation, add to each gallon half a pound of white sugar, and let the whole ferment again until it possesses nearly the brisk, pleasant taste which is desirable should be permanent. Pour out a quart of the cider and mix with one fourth of an ounce of sulphite (not sulphate) of lime, for every gallon the cask contains. Stir until it is entirely mixed, and pour the mixture into the liquid. Agitate the contents of the cask thoroughly for a few minutes; then let it rest that the impurities may settle. This not only mitigates but arrests the fermentation at once, carrying with it all the impurities and leaving the cider excessively clear and bright. It may be bottled in the course of a few weeks, or it may be allowed to remain in the cask and used on draught. It is asserted by some that the *sulphite* not only destroys the life, but imparts an unpleasant flavor to the cider; this, however, has not been our experience.

We propose the partial adoption of boiling the juice, and as this article is written for the farmer, who it is presumed

will commence his experiments upon a small scale, there will be little difficulty to bring the suggestion to proof. They who operate in the large way can easily modify the plan by erecting suitable apparatus. We presume that 32 gallons of cider are to be made—the quantity of apples required will be about 12 bushels, which ought to yield 36 gallons; less will not cover the waste that is inevitably incurred. It will now require some saccharine to raise its gravity. Without dwelling on minutia, which we have not had opportunity to confirm by positive experiment, we conclude that one gallon of honey, (West India,) boiled in a tin vessel with 16 gallons of the apple juice, will furnish the requisite quantity of saccharine matter. The boiling can be performed at one or more operations, to suit the convenience of the operator; and it should be continued moderately so long as any material quantity of scum arise, which should be removed as soon as it rises; and one-fourth of the fluid be carried off in steam. When cool, this should be added to the unboiled juice, with which it must be thoroughly mixed. The juice is now brought into a fit condition to be fermented; but here another perplexity presents itself; because cider-makers are at variance as to the first step to be taken—some requiring that the juice be exposed in an open, deep cask, while others pour it at once into casks, and even drive down the bungs tight. All, however, agree that a cool room, or a cool, dry cellar, and very low temperature—45° or less—are circumstances of the first importance. When perfectly settled it should be racked into another vessel, and if not clear, take the whites of six eggs with a handful of fine beach sand washed clean; stir them well together; then boil one quart of molasses down to a candy, and cool it by pouring in cider, and put this together with the eggs and sand into a barrel of cider, and mix the whole together. When it is thus managed, it becomes in the course of five or six weeks, perfectly fine and bright, of a light amber color, and after racking or bottling, will keep sweet many years if kept in a cool place. It may be bottled after racking, and will become sparkling cider.

We have succeeded in fining cider by mixing one quart of new milk with one gallon of the cider, and returning the mixture, and agitating the whole thoroughly when it spreads over the surface and carries all the impurities to the bottom, and leaving the cider excessively bright.

A piece of bloody fresh meat put into a cask of cider will also refine the cider, and serve for it to feed on.

Bennington Centre, Sept., 1862. C. N. BEMENT.

[For the Country Gentleman and Cultivator.]

SEED WHEAT.

It is the season for the wheat grower to make up his mind what kind of seed he shall sow, and where he shall obtain it. Whatever the kind, let him not fail first, to ascertain the character of its ancestry. Let him not only be sure that the grain is well perfected, and of the highest quality, but also that it has a respectable pedigree. It is a well established fact, that vegetables as well as animals, obtain a habit of growth which is often continued through many generations. This fact is appreciated and acted upon by our best farmers. They either select for seed from crop to crop, the best grain raised by themselves, or they purchase of those farmers who are most noted for growing the best crops. Other considerations, also, enter into the choice of seed. The climate where it is grown, the soil which produces it, the time of ripening, the liability to injury from insects, and others which the thoughtful farmer will not fail to think of.

Let us urge the farmer to make sure of the best seed he can procure. If the cost should seem an objection, he may save the additional expense by economizing in the quantity sown. This can be done by giving it as near as possible, the best covering to produce quick and healthy germination. Too little care has been used to give the seed a uniform depth of covering. It is a charming sight which a smooth wheat-field affords, when the first blades show themselves of a uniform size, and distributed evenly all over the surface. It does good to every passer-by to look at such a field. How much more must it delight the owner and his family. It is a thing of beauty, which, we are told, is a joy forever. What farmer will grudge the time and care needed to do his part towards giving beauty to eye and heart, at the same time that he provides the surest means to obtain a bounty for his pocket.

J. W. S.

SMALL-POX IN SHEEP IN ENGLAND.

An event has just occurred which has been the cause of considerable alarm and anxiety to the agricultural body generally. A short time ago a flock of sheep belonging to Mr. J. Parry of Allington, Wiltshire, was attacked by a disease which at first was not particularly noticed, but it soon assumed a very malignant form. The remedies that were applied proved futile against the disorder, and at length Professor Simonds was consulted, who, after hearing the peculiar characteristics displayed, at once pronounced it to be small-pox. On the Professor proceeding to the spot his opinion was confirmed. And the question then arose how it could have been introduced into the flock, for there is no instance on record of the disease having been self-generated. No possible clue could be discovered by which its appearance could be accounted for. It, therefore, occasions no small degree of alarm, as everything is in the dark with respect to this unlooked for and most mysterious appearance.

The disease had been previously known in this country, but only on one occasion, and it could then be traced to a foreign introduction; but on the Continent unfortunately it is too well known, and its visits are dreaded accordingly from the havoc they make among flocks. Its former appearance in this country took place in 1847, from the introduction of some Spanish Merino sheep infected with it, which were brought into Smithfield market. Those sheep were sold, and wherever they went they carried the disease with them. It was then that it was brought into Norfolk, Suffolk, Cambridgeshire, and the Eastern Counties generally; but to whatever quarter the disease thus spread, as it did in the subsequent year, it could be traced to some contact, however remote, with the infected source. But precautions were then taken, chiefly by isolation, to prevent the spreading of the disease; these proved successful, and it gradually died away.

Professor Simonds, the Veterinary Surgeon to the Royal Agricultural Society, on proceeding to inspect Mr. Parry's flock, found the animals in various stages of the disorder; some few had passed through the worst period, and might be pronounced convalescent, but of those attacked many died daily under the most disgusting circumstances, their bodies presenting a mass of malignant ulcers, and emitting a fearful stench. Mr. Simonds at once suggested inoculation of the remaining portion of the flock as the only means of preventing its almost total annihilation, and it now remains to be seen what will be the result of the remedy suggested; and of course the flock itself, although from its locality isolated from other flocks in the neighborhood, has been kept still more within itself, so as to stop every possibility of spreading the contagion, and so far at present the efforts have been successful.

A review of all these circumstances renders this a truly appalling visitation. On the former occasion, as we have observed, wherever the disorder spread, it could be invariably traced to the one source; but on this occasion there is no clue whatever. A flock of sheep, one of the largest in the district, noted for its continuous healthy appearance, which has had no contact with other flocks, and into which for nearly two years no new introduction has taken place, is all of a sudden attacked with a disorder assuming at once its most virulent and malignant form. This is indeed a matter for serious consideration and grave misgivings. If such a terrible disease can be self-generated, no one, whatever his locality may be, can hope to be out of the pale of its visitation, for Mr. Parry's sheep were in a situation proverbially healthy, and where previously, exemption from disorder was the rule. It is to be hoped that some light may be eventually thrown upon the subject, for all at present is darkness and dismay.

There is, however, this sort of consolation, that this disease, although highly contagious among sheep, cannot be communicated to other animals. Professor Simonds states that inoculation with the virus has been repeatedly tried, but that, singularly enough, it has never taken even in the case of goats, which may be considered of a kindred species. It is not communicable either to the human race.

[For the Country Gentleman and Cultivator.]

Letter from Hon. Henry F. French.

BOSTON, August 30, 1862.

LUTHER H. TUCKER, ESQ.—Accept my thanks for three volumes of the Transactions of the New York State Agricultural Society just received through your kindness. Without referring to these Transactions, of which I have now a complete set, I hardly feel safe to write upon any agricultural subject, for I often find that my donbtful questions have already there solved, or my ideas, which I had fully supposed somewhat original, had been fully expressed by some committees of your Society.

Withdrawn somewhat, though I trust but temporarily, from the daily practical pursuits of agriculture, my heart is still in the green fields, and I am more and more impressed with the truth of the sentiment attributed to Jefferson, that "they who labor on the soil, are the chosen people of God."

Even this awful and wicked rebellion serves anew to illustrate the importance of the agricultural interest to our country.

Although I cannot yet believe that the *people* of England, her farmers and laborers, her philanthropists, or her middle classes, even among tradesmen and manufacturers, are unfriendly to us, yet it is too manifest for doubt, that the aristocracy, which is the controlling power in the British Government, have allowed a petty spirit of jealousy of institutions from which the aristocratic element is excluded, to rejoice in our humiliation. This was the first impulse of aristocratic Europe generally; to exclaim to the advocates of free and popular institutions, "behold the failure of your great experiment of Republicanism; who shall henceforth say that the people are fit to govern themselves?" Count Gasparin in his recent work, "America before Europe," which is worthy the study of every American, and every European too, maintains that England is already ashamed of her hasty sympathy with a rebellion based on slavery, and is fast returning to a position more worthy of a free and law abiding nation.

However this may be, one thing is clear, that our best security against foreign intervention and the recognition of rebeldom as a nation, has been, not in our army nor our navy; nor in our power to injure, but in our ability *to feed the hungry of the old world!* Mr. Caird, who is perhaps, the highest authority, says that England in common seasons, consumes 300,000 bushels of grain a day through all the year, more than she produces. Last year her crops were far below the average, as were also those of France, while those of America were abundant, not only to feed ourselves at home and our vast armies in the field, but to meet the demands of the old world. England groaned for want of cotton to employ her spinners and weavers, who in the best of times labor hard for a bare subsistence. They could live without cotton, but without corn must come starvation. It was plain to see that intervention would bring war, and that war would at once stop all supplies of food, and so our power to do them good, in arts of peace, was mightier than all the arts of war.

The farmer then, who amid the din of arms, quietly tills his field at home, as truly serves his country, if he gives his heart and his influence to the right, as they who make the severer sacrifice of service in the tented field. There is a place and a duty for those whose youth and strength fit them for deeds of arms, but let no man whose duty requires him to remain at home, think ignobly of his humble labors on the farm.

There are men whose duty to the country even now, requires them to remain at home. Such are our public teachers, in our colleges and schools, the few whose gifts are peculiar, and whose places could not be supplied. Such, with deference to your own judgment, are the editors of the COUNTRY GENTLEMAN, whose weekly reports of the progress of agriculture, are as important to the country as the dispatches of our military chiefs. How goes the battle, and how come in the supplies, are equally important questions.

Your last paper gives encouraging statements of the progress of agriculture in your great state. As labor becomes dearer, through the absence of the million soldiers from the North and West, we must maintain our production by larger crops on less land, and by the use of animal power, and improved implements.

My old friend LEVI BARTLETT is a faithful watchman for you in New Hampshire, and gives reliable reports of the condition of agriculture in New England. We are, I think, constantly mingling more brains with our work, and so are aiding nature rather than forcing her.

Farm Implements.

In recent travels through New England, I have been struck with the rapid introduction of farm implements, especially in the hay harvest. On almost every respectable farm, I notice the mowing machine in operation, or observe its track where the hay is cleared off. We used to hear stout mowers boast that they could cut two acres a day, but this implied a start at four o'clock in the morning, and a severe strain on the system all day. Now the strong man may be in the army, while another, too old or feeble to bear arms, with a pair of horses and mower, can easily cut four times as much as the strong man claimed to be able to do, and about eight times as much as a prudent man should cut. The horse rake and the hay caps reduce still further the severe labor of haying, and the improved rigging for hauling and arrangement of barns for unloading, have in many places made this severest of all farm labor, rather a holiday amusement.

Root Culture.

In root culture and market gardening, the progress is almost as great. Farmers who formerly associated the idea of a lame back with an onion bed for the family, now lay out their acre of mangolds or turnips, with the thought that the old horse, with some one or more of the various cultivators and weeders, will do most of the work on the crop.

By precept and example, I have, since my visit to England in 1857, done what I could to promote the culture of the mangold. There is, certainly, no root so valuable for milk, and none so easily raised or kept, and I observe that on my Exeter farm, where my land was thorough drained with tiles, and is now in grass, that which had been cropped with mangolds has always been followed by heavy crops of hay, the fine culture requisite for the mangold bringing the land into the best condition for grass.

There has been an impression that grass does not well follow the turnip crop in this country. It is a question of much importance, and one upon which I should not like to give a decided opinion. In my own experience, I have had no failure of grass after turnips, although I have laid down fields in July with turnips and grass seed, and have also cropped the land heavily with swedes, and followed them with oats and grass. Still, as my practice has been to manure liberally for all root crops, and cultivate very thoroughly, perhaps heavy crops of grass would follow even a crop of roots not of itself favorable generally to grass.

Drainage.

My somewhat various experiments in tile drainage have now been under observation long enough to enable me to pronounce them completely successful. On my Exeter farm, most of which I still own, my operations were upon two kinds of upland, one a springy side-hill, so wet that cranberries grew naturally upon it, with a sandy soil resting on clay—the other a solid clay, so hard that a pick was used to move all the soil in the ditches below about one foot. In general, my tiles were laid four feet deep, and from 30 to 50 feet apart. The side-hill, from being too wet for any crop, became at once the earliest land in the town, and fit for a garden. I could work it at any time after the frost came out in spring till it was frozen in autumn, and it yielded the heaviest crops of roots, of oats, and of grass, that I have seen in that region. The

clay land, from being unfit to plow by reason of wetness in the spring, became at once fit for any crop. I cropped it two years with roots, followed the next year with oats, which failed, as did most of the oats in the neighborhood last year. This season it produced a very heavy first crop of hay and a second is now about to be cut. Perhaps a less depth may answer the purpose, but tiles four feet deep in solid clay, after a year or two for cracking the ground, will perfectly and speedily drain the soil.

Irrigation

Is a subject upon which I hope to see more written and more done in future. Many suppose that drainage and irrigation are for different lands, whereas they are parts of the same system. Irrigation I take to be chiefly valuable in this country east of the rocky mountains for grass crops, and I think on almost any field two or three crops of grass may be produced by irrigation with almost any running water. There may be, as Major DICKINSON says, lime water that will not benefit grass, and it may be that muddy water is better than clean water, but so far as I learn by observation or reading, irrigation with clean water is usually beneficial. In California they have a practice of irrigating with water pumped from wells by horse or steam power. In such cases the water should, I think, be warmed by exposure before it runs upon the land.

The application of much water, however, to any but a very porous soil would prove at once destructive to all valuable vegetation, and unless nature has provided drainage, either by the slope of the field or openness of the soil, so that the water will at once pass off, underdrainage must be essential. Great benefit may be conferred upon the interests of agriculture by reports of well conducted experiments in irrigation.

Trusting that my long talk upon subjects so interesting to the farmer may not be quite without profit to your readers, I remain your friend. HENRY F. FRENCH.

[For the Country Gentleman and Cultivator.]

PROFITS IN KEEPING POULTRY, &c.

The profits in keeping poultry depend wholly upon the way in which the business is managed. It can be made profitable or unprofitable.

Poultry fanciers have been known to make considerable sums by shrewd management; and how often have boys, and old ladies even, gone into the business of keeping hens, commencing operations early in the spring and winding up at thanksgiving-time, with complete success. The way it was done was simple enough, and almost anybody possessed of patience and good nature—the latter principle quite essential—could do as well if he or she, as the case may be, would make the trial and persevere.

It is not necessary to have a fine poultry house, or any house at all; on the contrary, the most common shed will often times serve all the purposes for a shelter.

But when I took up my pen to write, it was to say something of my own experience in the hen business, rather than to discuss the somewhat philosophical question of "profits," a subject, by the by, which has of late occupied some portion of the COUNTRY GENTLEMAN, greatly to the edification of its numerous readers, and especially those of them particularly interested in the science of "henology."

Early in the spring I was afflicted with the hen fever. How it was brought on I cannot say, unless it was by "exposure" during an examination of a hen-house attached to my outbuildings—a very nice sort of an edifice, erected several years ago by a gentleman of both taste and means, and well suited to the business for which it was originally designed. However that may be, I clearly remember this fact, that while I was making the examination referred to my mind was considerably agitated, (from what cause I could not tell,) and I resolved upon the spot to put the hennery to its legitimate use, and the very next day I bargained with a "select" dealer, and paid down $10.50 for one cock and six hens, catalogued "Brahma fowls." Very large and very nice looking fowls they were. They proved to be moderate eaters, that is to say the quantity of food devoured by them was quite small, and their *litter* was less than birds of the common sorts of smaller feather.

At the go-off two of the hens kicked the bucket, and were tossed unceremoneously into the piggery, where I have reason to know they were interred after the manner usually practiced by the whole swinish race. But I soon had reason to rejoice over my investment, notwithstanding this seemingly unfortunate beginning. The other four hens commenced to lay, and in the course of a week or so, "averaged" an egg a day apiece. I had the eggs carefully put aside, and as circumstances favored, the process of incubation was intrusted to hens of the common sort. Three of this class hatched from thirty-three eggs just thirty chickens, all within the same week. I now confined both hens and chickens in a room 15 by 20, in my horse stable, feeding them regularly twice each day, upon cracked corn. They were supplied with fresh water as often as was necessary; and in this manner they were kept till the fourth week, when they were suffered to run out during the day in fair weather. The chickens are now nearly three months old, and of the thirty, twenty-seven lived. The other three died, one by paralysis, two by accident. The living are elegant specimens of their kind, and some of them will weigh four pounds and more. The cost of feeding this flock at the present time is just one quart of corn per day. That they would sell for several times what it has cost to raise them, I have not the least doubt. As layers the Brahmas are no "improvement," but in other respects I deem them the most profitable of the various kinds of fowls now in vogue. CIT.

[For the Country Gentleman and Cultivator.]

BEE-KEEPING IN ILLINOIS.

ST. CHARLES, KANE CO., ILL., July 31, 1862.

LUTHER TUCKER & SON—By the above you will observe that your correspondent on bee matters is still in the West I have been at this place since last Autumn, and shall probably remain here for some time—perhaps many years—as I find this an excellent section for bees. The season thus far has been the best for honey that I ever knew. There is no better country for white clover than the West. It grows here in great abundance, hundreds of acres, within range of my bees' flight, being literally covered with it. It has been in constant blossom the past two months, but is now nearly out of blossom. We expect another crop of blossoms soon, provided we are favored with frequent showers as we thus far have been. We have also considerable basswood in this section, which is one of the best honey producing trees in the world. The honey is of superior quality; it is of better flavor than white clover honey. The basswood is now out of blossom. It commenced to blossom and to yield honey about the 15th of July. Bees gather honey from this tree about ten days.

I am establishing an extensive apiary here. I started in the spring with 20 colonies, and now have 55, which are in excellent condition. This increase has been obtained by both natural and artificial swarming. Artificial swarming, however, is the best and surest mode of increasing rapidly Natural swarming is *very uncertain*. If the season continues good, I shall continue to increase my bees by dividing. In one month's time, if honey should be plenty, I could easily increase my present number to 75 good strong colonies. My aim is to purchase bees and to increase my present apiary, until I obtain 500 colonies. My present purpose is to have a *model* apiary in the highest meaning of the term, and the largest in the West. M. M. BALDRIDGE.

The more a woman's waist is shaped like an hour-glass, the more it shows that her sands of life are running out.

AGRICULTURAL PAPERS.

"The Ohio Cultivator" and "Field Notes," formerly published at Columbus, Ohio, have been consolidated with the "Ohio Farmer," at Cleveland, under the editorship of S. D. HARRIS—a movement quite as much in the interest of the Farmers of the State, we do not doubt, as in that of the proprietors of the journals themselves. We have never regarded the *mere number* of Agricultural Periodicals issued, as at all indicative of agricultural prosperity, or promotive of agricultural improvement—in comparison with the *character and trustworthiness* of those which *are* sustained; and we do not hesitate to say that the support extended to the agricultural press by the farmers of the country, will yield them better and better dividends of interest and instruction, the more it is concentrated upon those papers whose editors enjoy the public confidence, and whose proprietors are firmly established in general favor. The condition of our agricultural papers during the past few years, has been far too much like that of many of our colleges and other educational institutions—the number so great as to weaken far the larger portion of them, or keep them in a continual state of semi-starvation; while the farmers, distracted by the claims, and the competition of the claimants, have often scattered their subscriptions wherever chance might dictate, without regard to the standing or merits of the journals themselves, and sometimes at the risk of losing the money paid by the untimely demise of the paper paid for. The Agricultural and Horticultural Literature of the United States, might stand, without difficulty, at the head of its class throughout the world. We have the means and the intelligence to accomplish this. There is money enough expended upon it in the aggregate, by the farmers of the country to pay its cost. But it has been so crippled and diluted by this distribution into scores of different, dwindling channels, of the stream which might have turned perhaps a half-dozen sets of respectable machinery, that in point of fact we have scarcely anything which we should dare to place side by side with the labored issues of the British press, the well-illustrated and ably-conducted Parisian journals, or the half-scientific, half-practical periodicals of Germany.

In these remarks, we need scarcely say that we intend nothing personal to our Ohio friends. It is only the fear of being thought selfishly desirous of engrossing public support that has lead us to refrain from saying the same thing repeatedly on former occasions, as, during the past thirty years, we have witnessed the feeble births and feebler lives and scarcely regretted deaths, of so many attempts at sustaining professedly agricultural papers, upon the limited support of some one locality or state or section. They have all doubtless performed their share in the advancement of what is really a great and good cause; for by degrees they *have* in some measure operated to attract attention and awaken appreciation for what is higher and better. But, at the same time, they have also, with perhaps a few exceptions, given far less returns for the price they cost, than might have been had at the same time from other sources, and they have lowered the standard and diminished the resources even of our best and oldest journals. And when we speak of "diminished resources," we do not mean in a pecuniary sense, as concerns the publisher himself, who is always forced to a certain extent "to cut his coat according to his cloth," but as concerns the inducements he is enabled to offer for the contributions of able writers, for the experiments of practical workers, for the illustration of his pages, for the very weight and whiteness of the paper on which they are printed. All these points and some others affect the willingness with which leading men will co-operate to sustain a periodical; a writer who neither asks nor expects any money return for the results of that observation or experience which may have been a very costly thing to him in the getting of it,—will still like to have what he writes appear in the columns of a journal possessing some acknowledged influence, where it will not be disgraced by its accompaniments, nor lack attractiveness for inferior mechanical execution—in a word, where there is some honor or pleasure involved in "coming into print." So that there is something above and beyond what money will pay for, (of which, indeed, the foregoing is but a very imperfect illustration,) in the extent to which one's resources for good are prevented from extension, just in proportion to the multiplication of eager competitors with vast pretensions and little if anything to back them. The great principles on which all farming rests, are and have always been the same. And their elucidation and application under different circumstances, will always be treated most instructively *for any one locality*, even in our widely varying country, *through that medium which affords the widest and best means of comparison with the practices of all other localities*, and which unites the most general support in all. This appears to us to be so plainly true as to admit of no question, although it might be illustrated at far greater length; and it is therefore matter of no surprise to us to find in those papers which argue that each district should have "its own agricultural journal," probably nine-tenths of all their practical contents drawn directly or indirectly from the distant sources they decry so loudly as being "inapplicable" or "calculated to mislead."

— It was our intention to close with a single word expressive of the gratification with which we have in earlier times found representatives of *our whole country* united in the columns of this paper, as on common ground, for mutual intercourse and discussion, in which there was heard no voice of hatred and dissension, no sound of denunciation and war. And to ascertain how large a part of our now dismembered Union is represented in these quiet fields of agricultural debate, even during such a time of turmoil as the present, we turned over the numbers of the Co. GENTLEMAN for the last month (July)—the very season at which farmers are least inclined and have the least time to wield the pen—with the following result: during that single month, 20 out of the 24 loyal States,* one territory, the three neighboring provinces, together with England and Scotland, contributed original articles for us, being a total of 26 States or countries; and the average number of them represented *each week* during July, was no less than *fourteen*. May the time soon come, when the ten kingdoms of "Secessia" also, shall once more have their representatives both in the columns of our paper and in the Congress of our nation!

STOPPING LEAKS IN ROOFS.—A writer recommends the following: Take four pounds of rosin, one pint linseed oil, and one ounce red lead, simmer together, and apply while hot. We have no doubt it is an excellent recipe, and the cement may be applied to other purposes.

* The only loyal States from which we did not receive and publish communications during July, were California, Rhode Island, Delaware, and Oregon, but going back over the files of the paper for a few weeks previously, would have made up all the four omissions.

AMERICAN POMOLOGICAL SOCIETY.

This society met at Boston on the 17th, and held its biennial session for three days. Nearly the usual number of members was in attendance, sixteen states or territories being represented. The Society occupied the rooms of the Massachusetts Horticultural Society, one of which, a fine spacious hall, was wholly occupied with the tables which were densely loaded with specimens of fruit. Among the larger contributions were a collection of 340 varieties of the pear from President Wilder, 225 from Wm. Reid of New Jersey, over 150 of pears, 100 of apples, and 50 of plums from Ellwanger & Barry of Rochester, N. Y., 160 pears and a collection of other fruits from W. B. Smith of Syracuse, 160 of pears from the Rhode Island Society for the Encouragement of Industry, 131 sorts of apples from T. T. Lyon, Michigan; and many collections from the vicinity of Boston, including 150 varieties of the pear from Hovey & Co. A large share of these were handsomely grown, and, each sort occupying an entire dish, and handsomely arranged, the whole display presented a fine and imposing appearance.

The meeting of the Society was called to order by President WILDER, who cordially and with emotion greeted the members on their attendance during the present commotions and public calamities. The first morning session was occupied with the reception of the credentials of delegates, the appointment of committees, and the report of the order of business. In the afternoon the President gave his biennial address, which was marked with all the interest, ability and eloquence which distinguish those given on former occasions. He alluded with great force to the changes which had occurred in the country since the last session in 1860, at Philadelphia—the entire absence of the southern delegation—the great loss the Society had sustained in the death of SAMUEL WALKER, one of the founders, and for many years one of its most efficient officers; and its deprivation of the labors of a former President, Dr. BRINCKLE, by his protracted illness. He alluded to the early history of fruit culture in the days of Gov. Endicott, of whose fruit garden, planted more than two centuries since, a bearing pear tree still remains—and to the recent rapid advancement in pomology. He furnished many valuable remarks and interesting facts in relation to the influence of seasons on the fruit crop, and pointed out the necessity of farther investigation in relation to the cracking of pears, and other unfavorable influences—the importance of shelter—and the indispensable necessity of thinning fruit on the trees, to secure the best quality, citing in illustration, the practice which good farmers find essential in giving sufficient space to their hoed crops; and stated that a cultivator of market apples in the vicinity of Boston had been highly successful by thinning the fruit on his trees. The success which had crowned the labors of some originators of new varieties was alluded to, and the gratifying results pointed out in the production of Clapp's and Dana's seedling pears, and Roger's hybrid grapes. The address closed with an eloquent appeal on behalf of the Union, which was received with much emotion by the members.

The election of officers resulted as follows: Marshall P. Wilder, President, James Vick, of Rochester, Secretary, and Thomas P. James, of Philadelphia, Treasurer—with the former vice-presidents from each state. It was concluded after an animated discussion to allow the former vice-presidents in the rebel states to stand, until their position is known.

P. BARRY, Chairman of the General Fruit Committee presented an able and valuable report, containing a list of the fruits recommended by local committees in 35 districts in seventeen states, with marks attached to each showing what districts had recommended each sort, and giving the local information called for at the last session of the Society in Philadelphia. This report is printed in tabular form, occupies 55 closely printed pages, and shows at a glance not only how many votes each sort has thus received, but indicates every locality where it succeeds. According to this report, the Early Harvest Apple succeeds in 27 of the 35 districts, Red Astrachan in 24, Yellow Bellflower in 19, Fall Pippin in 21, Sweet Bough in 19, Gravenstein in 14, Northern Spy in 13; while Newtown Pippin has succeeded in but two districts, Canada Reinette, Spice Sweet, and others in but one. Among pears, Flemish Beauty, has succeeded in 25 districts, Louise Bonne of Jersey in 24, Doyenne d'Eté in 21, Bartlett in 24, Belle Lucrative and Buffum in 22, Urbaniste in 19, among the more popular sorts, and on the other hand; such fine but little known new sorts as Abbott, Conseilleur de la Cour, Dana's Hovey, &c., have but a single vote each. We give these merely as examples, and showing the great value attached to an extended catalogue like this of 178 varieties of the apple, 122 of pear, 43 of cherry, 55 of peach, 33 of plum, 17 of native grapes, 22 of foreign grapes, 18 of currants, and many others of smaller fruits. A standing committee is to give special attention to the continual perfection of this catalogue,—which already contains a great amount of information not anywhere else to be found.

Most of the remaining time of the sessions was occupied in eliciting information in relation to new and other varieties, of great interest and value, a brief report of some portions of which will be furnished in our next number.

OFFICERS CHOSEN FOR THE COMING YEAR.

President—Hon. MARSHALL P. WILDER of Massachusetts.

Vice-Presidents—S. L. Goodale, Maine; B. F. Cuttler, Pelham, N. H.; J. S. Cabot, Massachusetts; D. Read, Vermont; Silas Moore, Rhode Island; —— Bacon, Connecticut; Charles Downing, New-York; William Reid, New-Jersey; R. Buist, Pennsylvania; E. Tatnall, Delaware; Charles B. Calvert, Maryland; Yardley Taylor, Virginia; Walter L. Steele, North Carolina; Wm. Schley, South Carolina; Richard Peters, Georgia; Jos. L. Moultrie, Alabama; Dr. M. W. Philips, Mississippi; S. M. Wheaton, Tennessee; Lawrence Young, Kentucky; Dr. J. A. Warder, Ohio; ——, Michigan; Wm. Loomis, Indiana; T. W. Felt, Lousiana; C. R. Overman, Illinois; N. J. Coleman, Missouri; Geo. Worthin, Arkansas; V. T. Ambler, Florida; Robert Avery, Iowa; —— Willey, Wisconsin; Simpson Thomson, California; Joshua Pierce, District Columbia; Edward Hunter, Utah; Amasa Stewart, Minnesota; C. B. Lines, Kansas; Wm. Davenport, Oregon; Thos. Affleck, Texas; Hugh Allen, Canada East; D. W. Beadle, Canada West; Robert Jardine, St. John, N. B.

Secretary—James Vick, Rochester, New-York.

Treasurer—Thomas P. James, Philadelphia, Pa.

Executive Committee—President and Vice-Presidents, ex officio; W. D. Brinckle, Philadelphia, Pa.; Richard Peters, Atlanta, Ga.; M. B. Bateham, Columbus, O.; W. L. Steele, Rockingham, N. C.; S. B. Parsons, New-York.

[For the Country Gentleman and Cultivator.]

Film on a Horse's Eye.

EDS. CO. GENT.—About three months since I discovered a serious film on the eye of a mare belonging to me, which made one eye totally blind. I was advised to try different remedies by different persons—the first was to put in burnt alum powdered, twice a day for several days. This had no beneficial effect, but rather the contrary. I then tried bathing with cold water three times a day, taking it directly from the well. In a week or ten days it began to get better; in two months the sight was restored, apparently as well as the other. J. SIBLEY.

Gasport, Niagara Co., N. Y.

We have generally a much stronger curiosity to know what is said, than to know what is true.

Mr. Taylor's South-Down Sale and Letting.

The sale and letting of South-Down Sheep belonging to the flock of Mr. J. C. TAYLOR of Holmdel, N. J., took place Sept. 3d, as advertised, drawing together a larger company of interested spectators and bidders than might have been anticipated at the present time. Indeed the assemblage was not only considerably larger, but the result much more gratifying than at any of Mr. TAYLOR's previous sales. When *fifty head* of South-Downs can be disposed of, lambs and all, *at an average of very nearly forty dollars per head*, there is little reason for complaint; although it must be added that when the prices are taken individually, many of the sheep, of both sexes, went at a *very low figure*, in comparison with their value and the cost of their immediate progenitors, and were therefore great bargains for their purchasers.

We are not yet in this country quite up to the English system, so convenient and so economical both for breeders and flock-owners, of *renting rams*—doubtless owing very greatly to the much longer distances from which many buyers come to the point of purchase, and the therefore heavy cost of transportation and increased risk of accident. Only five rams were rented, consequently, at Mr. Taylor's,—in fact only seven were offered—but the price at which they went was a good one, averaging over $60—including one at $100 to PETER LORILLARD, Esq., of Westchester Co., N. Y. The highest priced ram sold, was a shearling of Reserve's get, which went to Judge CHAFFEE of Ohio, for $80; the next highest, also a "Reserve" lamb, went to Mr. PHINEAS R. CLOSE, an enterprising farmer of Connecticut, who is getting up a valuable South-Down flock, now numbering about 20 head. Judge CHAFFEE also took the two highest priced ewes, respectively at $65 and $57.50, but he was quite closely followed by Mr. A. C. SISSON of Luzerne Co., Pa., who was one of the largest and most judicious purchasers present. Hon. A. B. CONGER, who was not there in person, was quite a large buyer; and toward the close of the day the auctioneer might have been observed most carefully watching for the decisive nod of the great Chicago farmer, Hon. JOHN WENTWORTH.

The list of purchasers will give an idea of the company present. Among others not there named, were Col. LEWIS G. MORRIS and JAS. L. MORRIS, Esq., of New-York; SAMUEL THORNE, Esq., of Thorndale; A. B. ALLEN, Esq., of New-York; O. JUDD, Esq., of the Agriculturist, just returned from three months among the flocks and herds and travel-routes of Europe; E. COMSTOCK, Esq., of the Argus; Mr. D. HEYWOOD, a Columbia County South-Down breeder; THOS. BELL of Eatontown, and many other New-Jersey farmers, who regarded with evident gratification the success of their neighbor's efforts to maintain a flock of standard value and reputation throughout the country.

We ought not to close without a single word as to the fine order in which the Sheep were so uniformly found—not high enough in condition to risk their breeding, as Mr. TAYLOR is fully convinced, but showing a predisposition to take on flesh, remarkable for its manifestation with scarcely a single exception throughout the whole flock. For intance, in the field of ewes containing sixty head of a breeding age and sixteen shearlings, this uniformity was the subject of general observation; but, in answer to our inquiries as regarded the feeding they had had, we found that no variation had been made from Mr. TAYLOR'S regular system as described in our account of the flock last winter—viz.: *not to feed the ewes at all* after April. The 60 ewes in this field had raised 76 lambs, which came in March; they were fed somewhat during March and April while the lambs were most heavily taxing them, and the total amount of the food which each one had consumed during a whole year previous to this Sale, did not exceed 18 cents' worth of oats.

We give below the details of the sales and lettings effected:—

SHEARLING RAMS SOLD.

No.	Sire.	Dam's Sire.	Purchaser.	Price.
1.	Vigor—Young York	—L. Hasbrouck,	Kingston, N. Y.,	$45.00
5.	Young Prize,	do.	do.	45.00
8.	do.	(dam imp. 1856)—Geo. Bachelder,	Stanstead, C. E.,	52.50
10.	Reserve—Young York	—T. R. Davis,	Westchester, Pa.,	42.50
11.	do.	World's Prize—(passed.)		
13.	do.	No. 14, imp. 1859	—N. L. Chaffee, Jefferson, O.,	80.00
15.	do.	No. 29, do.	Wm. Bluck, West Lafayette, O.,	50.00
17.	(Twin to No. 15)	—J. P. Thomas,	Chester Co., Pa.,	55.00
22.	Reserve—World's Prize	—(passed.)		
23.	do.	do	Henry Pyle, Columbiana Co., O.,	40.00
25.	do.	Master Fordham	—Lewis Houcks, Chester Co., Pa.,	52.00
26.	do.	Frank—Phineas R.	Close, Greenwich, Ct.,	61.00

RAM LAMBS SOLD.

2.	"No. 89"—dam imported 1861,	— —,	New-York,	$30.00
4.	do.	do.	Sanford Howard, Boston,	25.00

EWES SOLD.

44.	Shearling—by Vigor	—A. C. Sisson,	Waverly, Pa.,	$32.00
45.	do.	do.	do.	46.00
46.	do.	by Young Prize	—N. L. Chaffee, Jefferson, O.,	65.00
48.	do.	Reserve	—J. P. Thomas, West Chester, Pa.,	37.50
51.	do.	do.	Geo. Bachelder, Stanstead, C. E.,	37.50
55.	do.	do.	Henry Ingersoll, Philadelphia, Pa.,	40.00
9.	Two Shear—by World's Prize	—N. L. Chaffee,		57.50
33.	do.	do.	A. C. Sisson,	52.50
38.	do.	do.	do.	42.50
42.	do.	do.	N. L. Chaffee,	35.00
27.	Three Shear--	do.	Henry Ingersoll,	40.00

EWE LAMAS SOLD.

66.	By Reserve—dam by World's Prize—Hon. Jno. Wentworth,		$33.00
68.	By Webb's Favorite—dam by World's Prize, Hon. A. B. Conger, Haverstraw, N. Y.,		35.00
69.	By Reserve—dam by Young York—Wm. Bluck,		31.00
72.	By Webb's Favorite—dam bought of Col. Morris—William Bluck,		31.00
75.	By "No. 89"—by dam World's Prize—Hon. A. B. Conger,		41.00
77.	do.	do. do. do.	37.00
81.	Webb's Favorite—dam by Frank—Wm. Bluck,		32.00

OTHER RAM AND EWE LAMBS SOLD—PEDIGREES NOT SPECIFIED.

Ram Lamb—purchased by	Chas. H. Conover,	Marlboro, N. J.,	$13.00
do.	do.	J. Archer, Illinois,	27.00
do.	do.	J. J. Conover, Allentown, N. J.,	25.00
do.	do.	A. Norris, Spencer, N. Y.,	21.00
do.	do.	Rev. Mr. Schenck, Marlboro, N. J.,	14.00
do.	do.	J. J. Conover, Allentown, N. J.,	14.00
do.	do.	do. do.	14.00
do.	do.	I. K. Demott, Hunterdon Co., N. J.,	18.00
Ewe Lamb—purchased by	Hon. John Wentworth,	Chicago, Ill.,	26.00
do.	do.	do. do.	16.00
do.	do.	do. do.	16.00
do.	do.	do. do.	24.00
do.	do.	do. do.	21.00
do.	do.	do. do.	21.00
do.	do.	do. do.	22.00

RAMS RENTED FOR THE SEASON.

106.	Two-Shear—Imported from Webb, 1861	—Hon. A. B. Conger,	$52.50
14.	do.	"Young Prize,"—Henry Ingersoll, Esq.,	25.00
24.	Shearling "Young Park Ranger,"	—P. Lorillard, Esq.,	100.00
21.	do.	"Young Norwich," N. C. Sisson,	80.00
12.	do.	Sired by Reserve—Hon. A. B. Conger,	47.50

SUMMARY.

10	Shearing Rams sold, averaged,	$52.30	Total,	$523.00
11	Ewes averaged,	43.60	do.	479.50
10	Ram Lambs averaged,	20.10	do.	201.00
14	Ewe Lambs averaged,	29.00	do.	386.00
5	Rams rented for season averaged,	61.00	do.	305.00
				$1,894.50

Total sold and rented 50, averaging, $37.89

[For the Country Gentleman and Cultivator.]

IT PAYS TO IMPROVE FARMS.

In 1858 I thoroughly underdrained my west lot of 40 acres, using the inside walls and loose stones to fill the drains. In 1859 I gave the land a liberal dressing of of barnyard manure and leached ashes, and took off a good crop of corn. In the summer of 1860 my crop of oats was large. In the fall I applied a light coat of manure, and twenty bushels of ground bone to the acre, and seeded down half the lot with wheat, and the balance with rye. In 1861 the crop of grain was fair. This year the lot produced 120 tons 477 pounds of hay—over 3 tons per acre, being fully six times as much as the yield previous to 1859.

WARREN LELAND.

Highland Farm, near Rye, Westchester Co.

CROPS IN GREAT BRITAIN.

For awhile we had advices, dating from the last of July, of a brightening harvest and improving crop prospect in Great Britain. But the latest intelligence now exhibits a relapse of unfavorable weather, and the estimates of those most competent to judge prove, conclusively that the Wheat in the United Kingdom is turning out more poorly than has been the case before in several years.

The London Agricultural Gazette (August 16,) has just gathered in its customary harvest reports from about 200 correspondents in every grain-growing county in Great Britain, and the following is the tabular epitome of these returns:—

Crops.	Over Average.	Average.	Under Average.	Total Reports.
	No.	No.	No.	No.
Wheat.	1	37	150	188
Barley, ...	26	108	53	187
Oats, ...	37	108	55	200
Beans,... ..	42	80	13	135
Peas, ...	10	73	23	106

The editor of that journal accompanies the detailed statement with these remarks:—

"It results from these figures that the wheat crop is very inferior, that barley is barely an average crop, that oats are a fair average, that beans are generally good, and peas on the whole a fair crop. There can be no doubt, if the gentlemen who have favored us with their opinions have taken only ordinary care in forming them, that the wheat harvest crop of 1862 is one of the worst we have had for many years. There has always hitherto, on the occasion of these annual returns, been, among two hundred correspondents, a considerable proportion who have declared the crop to be over average, even where the preponderance of opinion and the ultimate experience lay all the other way. We have never before had to report that of 188 reporters there is only one who speaks of the crop in his neighborhood as being 'very good'—and he is from an Irish county whose wheat crop has no great influence on the general supply of the year. And it is a still worse report of the information which has reached us, that out of 188 there are no fewer than 150 who declare the crop to be inferior—only 37 who anticipate an ordinary return. Storms of wind causing the plant to be root-fallen before the seed was fully formed—"red gum' and 'mildew,' the consequence of an unkindly summer—have produced their natural result, a deficient harvest."

In the Mark Lane Express of Aug. 18th, we find the following remarks on the Wheat supply for the coming year:—

"With all our extended breadth this season, it seems doubtful whether we shall reap an average gathering. But as our popular increase is not so stationary, and we begin with nearly empty granaries, and, as regards old corn, with almost clean barns and rick-yards, so we must again be in the condition of large importers all the year through. It is indeed well that our neighbors, the French, report about an average yield, and their first gatherings, with favoring markets, may soon be dropping in, instead of their requiring another million qrs. of English growth. Without, then, unforeseen damage in our fields, there is no fear of obtaining all needed supplies; but, at the same time, there is no prospect that prices will descend to that low scale which, till lately, some were expecting as the consequence of a superabundance."

As to the Potato Crop, which is not included in the above reports, the North British Agriculturist of Aug. 20th, says:

"The recent heavy rains have caused increased apprehension as to the ultimate fate of the potato crop. In several of the English counties the blight has appeared, and in the more southern counties the haulms and tubers are rapidly decaying. In Scotland the potato fields show a deficiency of plants, and these are generally weak and stunted in appearance. In Ireland the potato crop is reported to be very inferior. Taking the United Kingdom as a whole, the half of an ordinary crop is all that can be calculated upon, even with the occurrence of dry weather for the maturing of the tubers."

The paper last quoted, concludes its article thus:—

"There can be no question now that unusually large imports of grain will be required, and that an advance in prices, particularly of wheat, will rule for some months. The accounts from the United States are not very favorable, some apprehending that the raising of such a stupendous army during the present month, when the wheat harvest is just completed, but the maize and other crops yet remaining unharvested, will prevent extensive shipments of grain to this country; we will, therefore, require probably to draw the greater portion of our supplies from the Black Sea provinces of Russia and other Continental States."

We have fewer fears for a serious result from the army recruiting, upon the production of this present season, than upon that of 1863. There must be a large surplus for exportation from this year's crop; but it cannot be impressed too earnestly or too forcibly upon the Farmers of the United States, that *every acre* ought to be seeded, either to winter grain at once or to spring grain when the season opens, which *can possibly be put in by the utmost exertion.* The recent calls for so large an additional force cannot fail to press heavily upon the agricultural labor of the coming twelvemonth.

PROPAGATION BY CUTTINGS.

The process of propagation by cuttings is simple, and with ordinary care is usually successful. The theory is, that slips or cuttings of most species of plants, if plunged for part of their length in moist sand, and kept close and shaded from the sun, will emit roots and soon become capable of growth under ordinary circumstances and with no special protection. This emission of roots is much hastened by the application of bottom heat; that is, heat so applied that the bed of sand in which the cuttings are placed may be heated. This heat must be slight, but should be constant and steady, and is most perfect when it can be obtained by means of hot water, which will maintain a more uniform heat than any other method of warming. In a well constructed and well managed propagating bed, most cuttings will rapidly strike—those of some sorts of verbena, for instance, beginning to emit roots in twenty-four hours after being placed in the bed.

Cuttings should be made from growing shoots and should include several joints or leaves, the cut being made just below a leaf. The cuttings should be inserted half or two-thirds their length in the sand, first cutting off the leaves on that portion of the slip which is in the sand. Two or three cuttings may be placed in a small flower pot filled with sand and covered with a tumbler, and will grow in most cases quite readily without bottom heat. The length of a cutting is not very material; if long enough to contain several joints it is sufficient. When cuttings begin to grow vigorously it is generally an indication that they have rooted, but this is not certain. They can very easily be taken up and examined, and if no roots appear they can be plunged again.

Any kind of sand may be used for striking cuttings in, but white sea sand is generally used, being sharp and clean, both desirable qualities.

Cuttings of geraniums and other fleshy plants may be laid on a shelf to dry for several days before plunging, and should not be kept too moist or close after they are in the sand or they will rot.

Very neat propagating stands may be obtained at some of the seed stores, having a small spirit lamp underneath for heating water to give the proper bottom heat. G. B. H.

THE CULTIVATOR.

ALBANY, N. Y., OCTOBER, 1862.

REPORT OF THE COMMISSIONER OF PATENTS for the Year 1861. AGRICULTURE. Washington: Government Printing Office.

A copy of this recently issued "Report" has just been sent us by the Bureau of Agriculture. It differs in some respects from its predecessors; on the whole, it should perhaps be classed as an improvement upon many of them. We do not know who is responsible for the arrangement of the volume; the name of the present chief of the Bureau nowhere appears in it, either as an author or otherwise.

Far the larger part of the volume is made up of short articles contributed by various writers in different parts of the country, and partaking more of the character of the ordinary communications in our Agricultural papers, than that of essays or elaborate treatises. This gives a greater variety than usual, makes the book more readable and more generally interesting, while at the same time its contents are not quite up to the standard which we shall sometime hope to see them attain. One great fault almost everywhere apparent, is the carelessness of the editor or proof reader in charge. The Experiments of *Lane* (Lawes) and Gilbert are referred to for example, and the Hereford importations of Corning & *Latham* (Sotham) of Albany; the authors of several papers suffer very badly —Jos. Cope of Pennsylvania, being transformed into Jos. Cape, Jas. S. Grennell, of Massachusetts, into Jas. P. Gunnell, and R. S. Fay into R. S. Tray, although the last is corrected in the index. We have not examined the book very carefully with a view to the detection of such errors, but when they occur so prominently, no one can help observing them, and distrust is excited as to the correctness of other and more important details.

The leading paper in the volume is one which D. J. Browne was despatched to Europe to compile, on "The History of Flax," occupying 80 pages. The culture of Flax and Hemp follows, in 35 more, by O. S. Leavitt. There are a number of detached articles on Sheep and Wool Growing, from W. S. Colohan of Pennsylvania, Robt. George of Ohio, Jos. Cope of Pennsylvania, R. S. Fay of Massachusetts, T. M. Younglove of Steuben Co., N. Y. Cattle receive attention in one of the most judicious and valuable papers presented in the volume, occupying about 40 pages, and giving a condensed and entirely trustworthy account of the different improved breeds, from the pen of Francis M. Rotch—the only point in which the writer appears perhaps not so thoroughly posted from personal knowledge, being with reference to the Scotch cattle, which we notice he refers to wholly under the head of "Galloways," while in Scotland they recognize two divisions beside the Galloways, viz., the Angus or Aberdeen, and the Highland or "West Highlanders." The last mentioned is not a breed of so much importance, having received less attention from skillful breeders, and indeed inhabiting a rough country for very highly improved stock to come from; but our very successful friend, Mr. McCombie of Tillyfour, would by no means like to see his *Aberdeenshire* herd classed among the *Galloways*. We notice moreover that these distinctions, recognized for years by the Highland Ag. Society, are beginning to claim attention in Canada, and we should like to have seen them referred to in the article before us, although the omission by no means ranks as a serious defect, in comparison with its other merits.

This digression has occupied more space than we intended. The different Fruits receive a fair share of attention, particularly grapes about which it seems as though the thirst for information must be quite insatiable. There is a sound and useful article, if readers will devote to it the attention it deserves, on the philosophy and chemistry of Manures. "Ruth Hall" compiles "a few words on horses," and Mr. Flint gives an article on the Horses of New-England. Mr. Clift has an essay on the reclamation and value of Salt Marshes. Mr. Bollman of Indiana treats the subject of Indian corn. Mr. Grinnell sketches the Agriculture of New-England. Mr. Marshall of Oneida Co., contributes a few pages on Hop Culture. Mr. Hedges discusses at length Sorghum Culture and Sugar Making. Twenty pages, forming a curious jumble of odd scissorings from the newspapers, are adorned with the high sounding title of "Notes on the Recent Progress of Agricultural Science, by David A. Wells," in all of which there is not much "agriculture," and still less "science," to be found.

Knowing as we do most fully, how difficult it is to make up such a volume that shall not be open to criticism, we desire to refer as kindly as possible to the weak points in the one before us, and repeat that it shows some evidence of improvement in having perhaps secured, on the whole, a better and more practical class of writers than heretofore.

☞ The inventors, the mechanics and the farmers of the country, through such agencies as the New-York State Agricultural Society, last year asked Congress for a small appropriation to pay for fitting up an American department in the International Exhibition, and for the transportation thither of what we had to show. In the language of the street boys, Congress "couldn't see it!" "Perfidious Albion," as the Frenchmen call her, did not deserve this mark of our high consideration. So said our illustrious representatives.

They "could not see" that the inventors of the country asked the appropriation—not as a favor to England by any means—but with the selfish, though not altogether improper view of making money out of the English pocket, and selling their wares and inventions both to Europe and all its dependencies. They could not look upon the appropriation asked, in the light of an investment which would bring far more money back into the country than was taken out of it;—in the light of a pecuniary advantage to our people, as well as a matter of national credit to us.

What has been the result? A few enterprising Americans are represented, where we might have had hundreds; among these few, one single little invention, which would be regarded probably as altogether too insignificant even to be named in Congress, has brought its inventor as much money as Congress was asked to give for *the expenses of the whole American department!* We cut the following from the last number of the London Field:

MILKING BY MACHINERY.—The American cow-milker in the Exhibition, which has attracted and is attracting so much attention, has been sold, as far as the European rights are concerned, to Messrs. Watkins & Keen of Birmingham, for the pretty little sum of 5,000*l.* cash, with a good royalty. The orders for the machines are flowing in so rapidly as almost to exhaust the supply of manufactured "milkers" which are being produced at the rate of fifty a day.

In other words, a "cow-milker" alone, has refunded to the country all that it was necessary to spend to be well represented; while the large sales of other patents, of far greater value than this trifling affair, would have been so

much clear gain, and we should have had the pleasure into the bargain of demonstrating more fully than we could by any other means, that the United States are not altogether "gone to the dogs," and in a state of perfect commercial ruin and social anarchy, as our kind friends of the London Times have delighted to represent us.

☞ We are pleased to announce the safe return of Hon. E. CORNELL, President, and Col. JOHNSON, Secretary of the State Agricultural Society, from their recent journey in Europe. They reached Albany on Thursday evening of last week, having arrived at Boston the evening previous, after a return voyage shorter and more favorable than usual. At the session of the American Pomological Society at Boston, Col. JOHNSON made a brief speech on Thursday, which was received with great enthusiasm. He presented an invitation from the Royal Horticultural Society to American pomologists, to send fruits for exhibition.

SALE OF DEVON STOCK.—The following sales were made at Meriden, Conn., on Wednesday of last week, from the herd of R. LINSLEY: Cows sold to E. H. Hyde, 2d: "Majestic," imported; "Chance;" "Nelly Bly;" "Nelly Bly, 2d;" "Fairy 5th," 2 years old; also "Prince John," a yearling bull. To John Wentworth of Chicago: "Fairy 2d," and heifer calf; a bull calf out of "Nelly Bly;" "Empress Eugenie, 2d," 2 years old. To Thos. B. Buffum of Newport, R. I., a bull calf out of "Chance." To Levi Yale of Meriden, "Nelly Bly 5th." The prices were so unsatisfactory, says the Hartford Courant, that the sale was adjourned.

☞ Mr. P. V. VANDERVEER of Glenville, Schenectady County, has purchased from the herd of the Hon EZRA CORNELL, Ithaca, N. Y., a very promising Short-Horn bull calf, sired by the Duke of Oxford 2780, and out of one of Mr. C.'s Alexander heifers, "Mary Cattley, 2d," by Doctor Buckingham (14,405.)

SARATOGA CO. FAIR.—The annual exhibition of this Society was held at Saratoga Springs, Sept. 2–5, and was well attended. The entries were 167 ahead of last year. The following officers were elected for the ensuing year:

President—SAMUEL J. MOTT, Saratoga.
1st Vice President—Edward Edwards, Corinth.
2d do. do. —Lewis E. Smith, Halfmoon.
Recording Secretary—J. A. Corey, Saratoga Springs.
Corresponding do. —Jas. Thompson, Milton.
Treasurer—Milo J. Jenings, Saratoga Springs.

A GOOD DEVON MILKER.—I saw a statement in your issue of July 10, raising the question as to what breed of cows are the best milkers, and inviting information and reports on the subject. I have been visiting Mr. JOHN CORP of Freetown, in this county, who has for the last nine years given much attention to raising blooded cattle. I have conversed with Mr. C. considerably upon the subject of the different breeds. He showed me on his farm, some of the finest Devons, cows and heifers, I have ever seen in this State. One of them, "Nancy Dawson," (912, Davy's Devon Herd-Book,) during the first seven days of October last, made 12½ lbs. of butter, the cream only being churned—she is always milked in the usual manner, twice per day; sixteen quarts of her milk made 2 lbs. of butter—once 2 lbs. 3 oz. D. R. P. W.

☞ The Yates County Ag. Society holds its Show this year at Penn Yan, Oct. 9 and 10. The premium list is a liberal one, including, as usual, numerous copies of the different Agricultural Journals. President, GUY SHAW; Secretary, JOHN MALLORY.

A FINE BARN.—In a recent ride from Macedon to Rochester, I stopped to examine the fine new barn of J. LORD, near Pittsford. The owner is an admirer of fancy horses, and the barn was built with a view partly for their accommodation. It is of wood, vertically boarded, battened, and painted, and presents a handsome exterior. It is somewhat in the form of a T, the top being the front, which is about 45 by 95 feet. The rear is about 40 by 80 feet, besides over 100 feet sheds. The front portion is occupied with horse-stalls on the left, and a spacious carriage-room on the right; between which and conveniently adjacent are feed rooms, harness rooms, watering apparatus, &c. The interior is handsomely painted and grained and kept in neat order. The racks for feeding hay are an interrupted narrow space in front of the horses, filled from the hay-loft above, and boarded to shut out hay-seed and dust, except a grated opening directly in front of the horses' heads. A box, shutting tight, under each manger, keeps the straw in its place till wanted for use. A strong rope, with ring and hook, extends across the rear of each stall from post to post, to prevent the horses from backing out too far while secured by the halter, and from kicking each other, and is an additional safeguard against their getting loose in the barn.

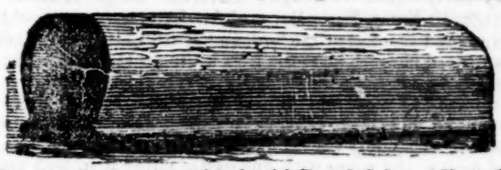
The barn cost $5,000, which nearly accords with the rule for estimating the cost given in the last ILLUSTRATED ANNUAL REGISTER, namely, one dollar for each two square feet of surface, when the barn is planed and painted, with an additional allowance for the expense of extra finish, harness-rooms, office, &c.

The farm contains 350 acres. J.

☞ The Vermont State Fair at Rutland last week, appears to have owed one of its main attractions to the simultaneous meeting of the Wool Growers' Convention, an extract from the proceedings at which will be found in another column. The sheep, moreover, are said to have formed, to the number of four or five hundred, the principal feature of the Fair, while the Morgan horses, for which Vermont is so noted, made a pleasing display, including about 100 entries. The cattle were usually good, but few in numbers. Only a few entries of butter and cheese were on exhibition. Of fruit there were but few varieties, apples taking the lead. The receipts are said to have been between three and four thousand dollars, being enough to cover all expenses incurred.

☞ Portugal has decreed that the free introduction is permitted of foreign cereals, wheat, corn, rye, barley, and oats in grain, flour and baked bread, through the inland and maritime of the kingdom, until the end of April, 1863. This looks as if Great Britain was not the only European country likely to suffer from short crops the present season.

NEW-YORK STATE TILE WORKS,
Near the Corner of Lark & Lydius-Sts.,
Albany, N. Y.,
WM. M. BENDER, Proprietor.
GEO. JACKSON, Superintendent.



The subscriber is prepared to furnish Round, Sole and Horse-Shoe Tile, over 13 inches in length, by the cargo, or in the smallest quantity on demand, at prices that he will defy any other parties to undersell him. He will warrant his tile hard burnt, and to fit close at the joints and altogether superior to any made in the United States.

All tile delivered on board of cars and boats in this city free of charge. Price list sent on application.

N. B.—Drainage to any extent and at any place done by contract and tile furnished for the same. Ap 10—w—Jy 1—mlyr.

Also DRAINING TILE MACHINES for sale, of the latest improved PATTERNS. For further particulars address as above.

Inquiries and Answers.

HORSE POWERS.—I wish to make inquiry of you or others that know whereof they affirm, through the columns of your paper, as to the best Endless Chain Horse Power, for two horses, with thrasher and cleaner? Also the amount of work they will perform in a day, say a good fair days work? W. H. BENSON. *Chautauqua Co.* [Our correspondent cannot do better than to request the manufacturers of the several Horse Powers advertised during the past few months in our columns, to send him descriptive circulars of their respective machines, and then judge for himself as to which will suit him best. Between the three or four most widely known makers, the choice is quite evenly balanced. — — The same answer will apply the inquiries of ALEX. DAY, of Ireland, Mass., since received, who wishes to know "which is the best thresher for a farmer having 300 to 500 bushels of grain a year, and whether a one or two-horse power is preferable."]

STUMP PULLERS.—"One who has tried it" inquires last week for a Stump Puller. He can procure what he wishes of Messrs. R. H. ALLEN & Co, 189 & 191 Water Street, New York. They have Willis' machine in two sizes at $150 and $200 respectively, and give it the preference decidedly over all others;—also Hall's, a small machine at $60, and Bates' Patent at $80.

DRILL BARROW.—Can you inform me which is the best hand machine (to be used by one person) for drilling in carrot, turnip and beet seeds? Is there one, in which the seed can be seen by the operator as it drops into the ground? Unless able to see the seed passing from the box, the operator is liable to go over a considerable space, if the machine gets clogged, before discovering it, causing an annoying irregularity in the coming up of the seed. G. L. *New Brunswick, N. J.* [We do not know of any drill in which the dropping of the seed can be seen during the operation. Good drills, however, very rarely clog; and when they do, the operator quickly perceives the altered sound. Emery's six dollar drill would doubtless answer the purpose intended. He sells a smaller one for $3.]

SOFT SOAP FOR FRUIT TREES.—Would there any injury arise from an application twice yearly of soft soap of about the consistency of paint, to all kinds of fruit trees? It is death to borers, and I thought it might be to trees when used too freely. I clear the ground away to the roots, and let the soap that runs down remain about the roots, which would be on a small tree, two tablespoonfuls. I don't think I have a borer on my place at this time. J. M., JR. *Leavenworth, Kansas.* [The soft soap will not injure the trees. It tends to prevent the borer from laying its eggs in the bark, but it will not kill the insect when once in. The only way then, is to punch them to death in their holes.]

APPLE SEEDS.—What is the best method for removing the apple seeds from the waste, after making the cider? A SUBSCRIBER. *Washington Co., Ill.* [Break up the pomace in a box or tub of water, and the seed will settle to the bottom, when the pomace may be racked off. Repeat the process until the seeds are quite clean.]

PEACH ORCHARD.—I am about to set a peach orchard, and wish you would inform me through your CULTIVATOR the kinds to set out—1st. What kind will yield the best for market, and if there is any difference about the frost killing them in the spring? Whether the late ones or the early are best, and what time is best to set them out, and if the trees would be any better off if obtained from some other State. A SUBSCRIBER. [Among the best peaches for market are Serrate Early York for very early—then Cooledge's Favorite, Large Early York, Crawford's Early, Early Barnard, &c. Later ones are President, Oldmixon Free, Late Crawford, and Ward's late free. There is but little difference as to the frost killing these sorts, although Cooledge and Early Crawford are regarded as among the hardiest. As a general rule spring is the best time to set them out, but they may be obtained from a distance in autumn, and safely heeled in till spring, by covering the roots and most of the stems with fine earth, filling it in well among the interstices, and guarding against mice. The great leading requisite of all is to keep the ground thoroughly cultivated and mellow always afterwards.]

STUMP MACHINES.—"One who has tried it" makes inquiry through the columns of your paper about stump machines. In answer I would say, that we have a kind here that your correspondent has probably *not tried*, or he would hardly be inquiring further. For the information of any or all concerned, I would state that the design is the lever purchase—the cost $200 to $300, according to strength—the power equal to the ousting of pine stumps at the rate of 20 to 80 per day, according to size, and it is manufactured here, where it originated and has been extensively used for a number of years. I have worked with one for the past six years; consequently speak knowingly. If "One who has tried it," will send me his address, I will furnish him with more particulars if he wishes. W. H. BENSON. *Jamestown, N. Y.*

RAT TRAP.—I would be pleased if you would publish in your next paper the best rat trap that you know of. H. S. C. [We know of nothing better than the common wire trap, which can be procured for four or five shillings. With one of these traps a smart boy can soon rid a place of rats.]

[For the Country Gentleman and Cultivator.]

Remedy for "Foul" in the Foot.

EDS. CO. GENT.—In your paper of July 3, 1862, you inquire for a cure of the "Fouls" in cattle. Enclosed I send you a certain remedy:

Cast the animal, and then wash and *soak* perfectly clean, the whole hoof—with a *sharp* and small bladed knife pare right down to the "seat of war;" but do not start the blood. After which "swab" with butter of antimony. When that has dried on, bind up the hoof in a poultice of

1 pint boiled linseed oil,
¼ pound blue vitriol,
¼ pound verdigris.

The verdigris and vitriol to be pulverised as fine as flour before mixing with the oil.

In a week's time take off the bandages, and if the "critter" is not perfectly sound at the end of another week, you can make up your mind that you have not pared so that the medicine has touched every spot and "crease."

I should have stated that the washing must be done with "soft soap and rain water."

I have cured numbers of cows in this manner. They are very apt to be troubled in this way on farms where hoof ailed sheep are kept, or have been kept.

Cortland, Sept. 8, 1862. PETER P. PETERS.

[For the Country Gentleman and Cultivator.]

GREAT CROP OF CORN.

EDITORS CO. GENT.—Sometime last winter I read an account of somebody in Agawam, who had raised one hundred bushels of corn to the acre, and I did not then believe the story. I then supposed, and still suppose, that I can and have raised as good corn as any of my neigbors. But that account set me to thinking how it could be done, and I think I can now beat the story from Agawam.

Last April I plowed my turf, (which had been mowed for several years,) very shallow—perhaps four inches deep. I did not harrow the land at all, but furrowed it out with horse, put a small shovelfull of compost manure in the hill, and planted an early sort of corn which I have raised some 20 years. When the corn was ripe enough to cut up, I measured and counted till I was satisfied that there are 4,400 hills on an acre. I then picked a small patch, husked the same, and hung the ears in the sunshine to dry, and when dry enough to shell well, I shelled it and weighed the shelled corn *very carefully*, and from that weight I calculated the weight on the acre, which is 8,112 lbs., making 144 bushels and 4 quarts per acre. The corn is now on the lot, and any one wishing to see it can do so.

When we hoed the corn the last time, I scattered a very little turnip seed all over the land, and appearances now indicate that I shall have a fair crop of turnips.

Near Springfield, Mass., Sept. 15. C. B.

"All maidens are good," says one moralist; "but where do the bad wives come from?"

TRUE DELAWARE GRAPEVINES—
PROPAGATED FROM THE ORIGINAL VINE.
PLANTS OF THE BEST QUALITY AT LOW PRICES.

Strong 1 year old, well rooted, Delaware Vines, 30 to 60 cents single; $3 to $6 per dozen; $20 to $40 per hundred. Extra strong layers from bearing vines, and 2 year old selected vines for immediate bearing, $1 to 1.50 each, with reasonable deduction by the quantity.

Also superior plants of Allen's White Hybrid, Anna, Alvey, Brinckle, Black King, Cassady, Creveling, Cuyahoga, Clara, Concord, Clinton, Catawba, Diana, Elsinburg, Golden Clinton, Graham, Garigues, Hartford Prolific, Herbemont, Isabella, Lenoir, Logan, Lincoln, Louisa, Lydia, Maxatawney, Manhattan, Marion Port, Oporto, Offer or Raisin Grape, Ontario, Perkins, Raabe, Rebecca, Rogers' New Hybrids, Nos. 1, 2, 3, 4, 5, 9, 13, 15, 19 and 33, To Kalon, Taylor's Bullitt, Union Village, Venango, and many others.

RASPBERRIES—Catawissa, ever-bearing, and Kirtland's Seedling.

CURRANTS—White Grape, White Transparent, Cherry and Black Naples.

STRAWBERRIES—Triomphe de Gand, Wilson's Albany, Jenny Lind, Trollope's Victoria, and Austin Shaker Seedling.

☞ Send for Descriptive Catalogue.

GEORGE W. CAMPBELL,
Sept. 11—w6tm1t. Delaware, Ohio.

50,000 NATIVE GRAPEVINES for sale at very low prices by the quantity, by
Aug. 28—wtf.m3t. HEFFRON & BEST, Utica, N. Y.

STANDARD PEAR TREES.—
THOMAS & HERENDEEN
offer for sale, at Union Springs, N. Y., many thousand Standard Pear Trees, of fine, vigorous, well ripened growth,
PROBABLY UNEXCELLED IN THE COUNTRY,
consisting of Bartlett, Lawrence, Sheldon, Flemish Beauty, Virgalieu, Seckel, Onondaga, Doyenne d'Ete, Madeleine, Belle Lucrative, Tyson, Anjou, and several other varieties. These were grown on unmanured land under the immediate care of J. J. THOMAS, are two and three years old, and are offered at $25 per 100, fine selection, or $30 per 100 extra fine.

Also for sale at Macedon
20,000 Superb Two Year Dwarf Pears,
at low prices, and a general collection of other fruit trees.
Sept. 4—weow3t.

FOR SALE.—The subscriber wishing to give up the farming businesss, offers his farm for sale, lying on Torringford Street, near Wolcottville, Winstead, New-Hartford, which afford the best of markets for the products of the farm. It contains about 115 acres, 40 of which is woodland, estimated at 2,000 cords, which will pay for the farm, delivered on the Naugatuck Railroad, 1½ miles distant. The buildings are first rate, most of them having been erected within a few years. It is well known as one of the best farms in this section, being in a very high state of cultivation, never having any hay sold from it. Also plenty of orcharding of grafted fruit. It is within a quarter of a mile of church and schools. The farm will be sold at a low price, and part of the purchase money may remain on mortgage if desired.

JOHN GILLETT,
Sept. 1—m2t. Torringford, Litchfield Co., Conn.

LODI PHOSPHATE,
Composed of RAW BONES dissolved in sulphuric acid, Night Soil, Guano and Wool Dust, made by the
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EXPRESSLY FOR
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This article will be warranted to contain no other material than those mentioned above; is undoubtedly the very best manure in market from its composition, and will be sold at the low price of $45 per ton, packed in barrels of 200 pounds each, nett weight, delivered free on board of vessel or railroad in New-York city.

Poudrette of First Quality
for sale at usual rates. Apply to
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Aug. 21—w8tm2t. 66 Courtlandt-Street, New-York.

AMERICAN WEEDS AND USEFUL PLANTS—Being a 2d and Illustrated edition of Agricultural Botany: an enumeration and description of useful plants and weeds, which merit the notice or require the attention of American agriculturists. By Wm. Darlington, M. D. Every Farmer or Farmer's Son who wishes to know the names and character of the plants growing on his farm should study this book. For sale at the office of the Co. Gent. and Cultivator. L. TUCKER & SON.

ALDERNEY COWS
HEIFERS AND BULLS,
For sale by ROBERT L. MAITLAND,
July 31—w&m1yr. Newport, Rhode Island.

SHORT-HORNS FOR SALE.—
HEIFERS, YEARLINGS AND CALVES,
Full of GLOSTER and OXFORD blood, will be sold on reasonable terms. Apply to FRANCIS MORRIS,
July 17—w&m3mos. Throgs' Neck, Westchester Co., N. Y.

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FOR SALE.
The subscriber offers for sale, at reasonable prices, a number of Short-Horn cows, heifers and bulls, of Bates' blood, and in prime condition, and also a few pure and high grade Alderney cows, heifers and bulls of the best blood in the country, delivered at the cars in Albany free of charge. Address Dr. HERMAN WENDELL,
Feb. 18—w&mtf. Hazelwood, Albany, N. Y.

PREMIUM CHESTER COUNTY WHITES.—THOMAS WOOD continues to ship to any part of the Union these celebrated HOGS in pairs not akin, at reasonable terms. Address PENNINGTONVILLE, Chester Co., Pa.
April 3—w1y—June 1—m1y.

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Diana,	do. 60c.	do. 1.10	do. 1.60	do. 3.00	do.	5.50
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Four Plants, One of Each, for $2.
I refer, by permission, to Rev. J. Knox. Pittsburg, Pa.
J. H. FOSTER, Jr., Dispatch Office,
Sept. 11—w4t.* Pittsburg, Pa.

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March 6—wtf.

1863 THE ILLUSTRATED 1863 ANNUAL REGISTER OF RURAL AFFAIRS.

NO. IX---FOR 1863.

The publication of the NINTH NUMBER of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS, for 1863, has been somewhat detained for the completion of a very full and valuable Treatise on Entomology, including those Insects about which there is now the greatest desire for general information, from the accomplished pen of the State Entomologist, Dr. ASA FITCH. We are happy to say that this article is now in the hands of the printers, and that the ANNUAL REGISTER will be ready for issue about the 20th of October. Meantime orders will be received and registered as usual, and at the usual rates:

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2. Screwing on Nuts—Leaky Roofs—Horse Fork—Painting.
3. To Avoid Running out of Hay.
4. Highways—Lightning Rods—Osier for Bands—Tape Line in the Cornfield.
5. Forest Leaves for Litter—Good Smoke House—Corn Marker—Scalding Tub—Harvesting Peas.
6. Chain Pumps—Irrigation—Draining—Clean Land.

VI. FRUITS AND FRUIT CULTURE—FOURTEEN ENGRAVINGS.
1. Autumn and Spring Transplanting.
2. Dwarf Apples.
3. Rules for Tree Planters.
4. Systematic Formation of Pyramids.
5. Two Native Plums.
6. Sending Buds by Mail.
7. Shortening in the Peach.
8. Construction of a Cheap Grapery.
9. Gooseberries.
10. Time for Pruning Orchards.
11. Fruit versus Malaria.
12. Dwarf Cherries.
13. Strawberries—Quick Returns.
14. Pruning the Quince.
15. Select Lists of Apples.
16. Labels for Fruit Trees.
17. Select List of Grapes.

VII. INSECTS BY DR. ASA FITCH—THIRTY-FOUR ENGRAVINGS.
1. Definitions of Terms, &c.
2. Descriptions of Orders.
3. Insects which Injure Fruit Trees.
4. Insects which Injure Grain Crops.
5. Insects Injurious to Gardens.

*** To show how full and valuable an article this is, it may be mentioned that Six Insects injurious to Fruit; Thirteen injurious to Grain, and Six injurious to Gardens, are described with complete and new Illustrations, engraved expressly for this article in the ANNUAL REGISTER. It forms, in point of fact, the readiest HAND BOOK OF ENTOMOLOGY for the practical use of the farmer and gardener, we have ever seen.

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2. Japan Pinks.
3. Bidens Atrosanguinea.
4. Cuphea Limapani—The Striped French Marigold.
5. Dwarf Nasturtium—New Sweet Williams.
6. Dwarf Convolvulus—Oenothera Camarkiana—Splendid Gazania.
7. Lychnis Haageana—Whittavia Grandiflora.
8. Calleopsis Cardaminifolia—The Gaillardias.

*** This article was written for the ANNUAL REGISTER, with Drawings and Engravings expressly prepared to accompany it, and not before published in this country, by JAMES VICK, Esq., of Rochester.

IX. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

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